Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

MP 1355/4/78

1
Ag84M
Cop.3
1355

DC BRANCH

DEXTRAN BIBLIOGRAPHY

EXTENSIVE COVERAGE OF RESEARCH LITERATURE (EXCLUSIVE OF CLINICAL) AND PATENTS 1861-1976

U.S. DEPT. OF AGRICULTURE
NAT'L AGRIC. LIBRARY
JUL 17 '78

UNITED STATES
DEPARTMENT OF
AGRICULTURE

MISCELLANEOUS
PUBLICATION
NUMBER 1355

PREPARED BY
SCIENCE AND
EDUCATION
ADMINISTRATION

On January 24, 1978, four USDA agencies—Agricultural Research Service (ARS), Cooperative State Research Service (CSRS), Extension Service (ES), and the National Agricultural Library (NAL)—merged to become a new organization, the Science and Education Administration (SEA), U.S. Department of Agriculture.

This publication was prepared by the Science and Education Administration's Federal Research staff, which was formerly the Agricultural Research Service.

DEXTRAN BIBLIOGRAPHY:

EXTENSIVE COVERAGE OF RESEARCH LITERATURE (EXCLUSIVE OF CLINICAL) AND PATENTS

1861-1976

Allene Jeanes, Retired Principal Chemist
Northern Regional Research Center

Miscellaneous Publication No. 1355

Science and Education Administration
UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D.C.
Issued April 1978

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Stock No. 001–000–03771–4

PREFACE

Interest in dextran literature culminating in this bibliography began in 1945 in relation to structural studies on starch. Investigating the use and chemistry of starch has comprised an important part of the research program of the Northern Regional Research Center (NRRC), formerly designated Northern Regional Research Laboratory (NRRL). Starch was well known to be a polymer of the major structural repeating unit 4-O-α-D-glucopyranosyl-D-glucose (maltose). A minor structural unit 6-O-α-D-glucopyranosyl-D-glucose (isomaltose) was generally believed to occur at the branch positions but had been isolated from starch in only small, impure amounts.

The author envisioned obtaining isomaltose from dextram by enzymatic hydrolysis in the way that starch is hydrolyzed to maltose by β-amylase. Dextran is the generic name of a class of homologous polysaccharides synthesized from sucrose by *Leuconostoc mesenteroides* and its congeners; it consists of α-D-glucopyranosyl residues linked predominantly by 1,6-bonds. The literature reported small-scale preparations of dextran(s) from numerous bacterial sources, basic structural information, and early evidences of a specific relation between the bacterial strain and structure of the dextran. The first reports on dextran-depolymerizing enzymes (dextranases) appeared in 1948 and 1949.

Pursuing our objective, preparation of dextran was initiated. Later a source was sought of an extracellular dextranase to depolymerize the dextran to isomaltose. Accomplishment of these plans was made possible through cooperation of microbiologists of NRRC's Fermentation Laboratory and facilities of the ARS Culture Collection. Research resulted in discovery of *L. mesenteroides* NRRL B-512 (In 1950, the B-512(F) substrain supplanted B-512 for all work at NRRC. Since, the dextran from this strain has been designated inexactly as B-512 in numerous publications. The dextrans from B-512 and B-512(F) appear to be identical.) and its dextran, which has the unusually simple structure of 95 percent α-1,6-linked residues in linear positions and 5 percent α-1,3-linked residues at branch positions. Dextranases were discovered that produced isomaltose and isomaltotriose in high yields from this dextran.

Concurrent research in Sweden had resulted in production of a synthetic blood volume expander from a dextran having about 16 percent branch points. In 1951, our research on dextran production, structure, and properties formed the basis for an intensive research program at NRRC to develop a blood volume expander in the United States. These investigations were closely coordinated with the programs and recommendations of the National Research Council (Division of Medical Sciences, Subcommittees on Shock and Burns and on Blood and Blood Derivatives); the Bureau of Medicine and Surgery, Department of the Navy; the U.S. Public Health Service, National Institutes of Health; and the Office of Medical Services, Department of Defense.

At the request of the Department of the Army, Office of the Surgeon General, additional fundamental laboratory and engineering studies were conducted at NRRC on the direct production of clinical dextrans by controlled enzymatic synthesis and by selected growing-culture fermentations. Some of this work has not been published.

An objective of research at NRRC concerned the relation of dextran structure to its physiological and immunological suitability as a blood plasma expander. Dextrans from over a hundred strains were prepared and great diversity was established in the identity and proportion of the non-1,6-linkages present. This research contributed to international choice of dextran from strain NRRL B-512(F) (or the equivalently constituted dextrans used in some countries) for production of plasma volume expander and other pharmaceutical products.

Isomaltose, obtained from an enzymatic hydrolyzate of NRRL B-512(F) dextran, served not only its intended purpose in starch research but also as the only existent supply of a necessary reference standard in the research program on clinical dextran.

Research on the dextran class of polysaccharides at NRRC was terminated in 1958. Since, the center has served as a worldwide clearing house for information on dextrans and a source of cultures and samples, both dextrans and isomaltose. Thus, fundamental investigations have been promoted, especially in carbohydrate chemistry, biochemistry, and immunochemistry and related areas of research. These highly purified and well-characterized samples have served as starting materials for research, model substances, and standards for assays and comparison. The results of this continued research are found in publications listed throughout this bibliography. The topics studied usually have been at the forefront of advancing research in the respective fields.

An earlier plan was to publish this compilation in several parts to diminish the effect of the great length. The only resultant of this plan, published in September 1967, was "Dextran Bibliography Part A: Patents on Production and Use of Native Dextrans, Partially Degraded Dextrans, and Their Derivatives," (U.S. Department of Agriculture, Agricultural Research Service, ARS-71-36). This plan was discontinued when computer facilities became available for preparation of the manuscript. The bibliography on patents, therefore, has been brought up-to-date and incorporated with the bibliography on research literature.

This compilation of research literature and patents, although extensive, is not all-inclusive. The literature on dextran is so vast that complete coverage is not practical. The topics covered most thoroughly are those related to NRRC research and interests to which our research and products have contributed. These topics are production of native and partially depolymerized dextrans, enzymatic synthesis and degradation of dextrans, constituent di- and oligo-saccharides obtained from dextrans, structure and properties of dextrans and their influence on the many aspects of dextran behavior investigated by others; and applications of dextrans and their derivatives. The immense clinical and specialized medical research literature on products made from dextran is represented here by a limited number of selected references.

CONTENTS

Introduction ---- 1
Bibliography organization ---- 3

BIBLIOGRAPHY OF RESEARCH LITERATURE

Classification and subject content of sections ---- 5
I. History and microbiology ---- 5
II. Preparation of native dextrans in growing cultures ---- 15
III. Enzymatic synthesis ---- 17
IV. Enzymatic degradation of dextrans and of isomaltose and its oligomers ---- 29
V. Production of clinical sized dextran ---- 38
VI. α-1,6-Glucans: stereospecific chemical synthesis and comparison with bacterial dextrans ---- 49
VII. Structural analysis of dextrans ---- 49
VIII. The constituent di- and oligosaccharide structural units of dextrans: isomaltose (6-O-α-D-glucopyranosyl-D-glucose) and its oligomers ---- 57
IX. The constituent disaccharide structural units of dextrans: nigerose or sakebiose (3-O-α-D-glucopyranosyl-D-glucose) and kojibiose (2-O-α-D-glucopyranosyl-D-glucose) ---- 70
X. Properties of native dextrans ---- 73
XI. Chemical and physical properties of clinical sized and other dextrans having molecular weight lower than native dextrans ---- 85
XII. Analytical methods and measurements ---- 94
XIII. Dextran in analysis, separation, and concentration of other substances ---- 100
XIV. Derivatives other than sulfates ---- 104
XV. Dextran sulfates ---- 122
XVI. Dextran, isomaltooligosaccharides, and dextran derivatives covalently bonded (coupled) to enzymes, nucleic acids, proteins, peptides, and the like ---- 135
XVII. Action of dextran on other macromolecules in solution, blood components, and thymus and tumor cells ---- 138
XVIII. Structurally related interaction of dextrans with concanavalin A and other lectins ---- 150
XIX. Immunology and related topics ---- 155
XX. Metabolism and distribution in the body ---- 180
XXI. Physiological properties ---- 193
XXII. Representative clinical uses ---- 200
XXIII. Dextrans and associated aspects in dental caries ---- 204
XXIV. Industrial uses ---- 216
XXV. Books and general reviews ---- 224
XXVI. Addenda ---- 226
Index of authors of research literature ---- 229

BIBLIOGRAPHY OF PATENTS

Order of arrangement and definitions ---- 274
Classification and subject content of sections ---- 275
XXVII. Production of native dextrans in growing cultures ---- 275
XXVIII. Enzymatic synthesis of native and clinical sized dextrans ---- 277
XXIX. Enzymatic degradation ---- 279
XXX. Nonenzymatic methods for production of dextrans in the clinical, intermediate, and low-molecular sized ranges ---- 286
XXXI. Special procedures for purifying and stabilizing clinical dextrans and their solutions ---- 295
XXXII. Industrial uses ---- 297
XXXIII. Food uses of dextrans and their derivatives ---- 306
XXXIV. Pharmaceutical applications of dextrans and their derivatives ---- 309
XXXV. Production and industrial uses of dextran derivatives ---- 333
Index of patentees ---- 348
Index of assignees ---- 362
Acknowledgments ---- 368

DEXTRAN BIBLIOGRAPHY:

EXTENSIVE COVERAGE OF RESEARCH LITERATURE (EXCLUSIVE OF CLINICAL) AND PATENTS

1861-1976

Allene Jeanes[1]

INTRODUCTION

The extensive literature on dextran, which spans more than a century of scientific observation and pervades a wide range of scientific disciplines, attests the unusual and continuing significance of this many-membered class of α-D-glucans. This situation results from numerous factors, of which some of the most basic relate to the nature of dextrans themselves: the micro-organisms that produce them, the ease of enzymatic synthesis of dextrans by a type of extracellular glucosyltransferase, and sucrose, the substrate commonly required by the bacteria, because it is exposed to the bacteria during certain stages of production.

Dextrans, by definition, have 50 percent or more of their α-D-glucopyranosyl residues linked by 1,6- (sometimes designated 1→6) bonds. The remaining linkages may be 1,2-, 1,3-, or 1,4-. Only one of these types may occur in a dextran, or two, or even all three. Thus, great structural diversity is created. Differences in distribution of non-1,6-linkages and in distribution and length of branches creates further diversity. Details of structure determine such characteristics as solubility or insolubility in water and immunochemical and other biochemical properties. Structure is determined genetically by the dextran-producing strain.

Dextran-producing bacteria abound in the environs of sugarcane fields and mills; and excluding dextran and its deleterious effects from cane juice and even refined sucrose is virtually impossible. Among the ubiquitous dextran-producing bacteria, some are causative agents of dental plaque; others have been found in cases of bacterial endocarditis. Most dextran-producing bacteria are members of the family *Lactobacillaceae* and of the genera *Leuconostoc, Streptococcus,* or *Lactobacillus.* An abundant research literature (industrial, academic, and medically related) results from the wide distribution and vigorous dextran-producing activity of the various species and innumerable strains of these genera.

---

[1] Principal chemist (retired), Northern Regional Research Center, Science and Education Administration, U.S. Department of Agriculture, Peoria, Ill. 61604.

Discovery of dextransucrase, the type of extracellular enzyme that synthesizes dextrans, opened a new and dynamic era in study of the theory, mechanism, and practice of enzymatic synthesis of polysaccharides. Production ease of dextransucrases has permitted ready access to material for purification and further investigation.

The greatest single stimulus to dextran publications and patents was the discovery (about 1942) that a synthetic blood volume expander could be produced by partial depolymerization of native dextran and fractionation of the depolymerizate. Numerous new areas in fundamental research and theory and in technology were opened up and developed. In addition to clinical sized dextran for intravenous infusion, a unique series of dextran fractions, with lower molecular weight than native macromolecular dextran, have been developed. These fractions, which differ primarily in molecular weight but also in details of branching, have augmented studies on chemical, physicochemical, and biochemical properties; on derivatives; and on medically related and other applications. Since 1942, several new industries have been developed that produce dextrans and their derivatives for wide use in research and industry.

Uses of dextran as a blood volume expander and certain dextran derivatives as therapeutical agents have elicited research on the fate of dextran in man and animals, its elimination or metabolism, and its influence on various tissues (especially blood and its components), organs, and enzyme systems.

Remarkable compatibility with these biological systems has been found for dextrans having low percentages of non-1,6-linkages and suitable molecular weight. Dextrans of higher molecular weight and higher proportion of non-1,6-linkages, however, have been found to interact with many proteins. Some of these reactions depend mainly on molecular weight. Other interactions, however, such as occur with immunoglobulins and such globulins as concanavalin A, are specifically related to dextran structure. Use of dextrans and oligosaccharide structural units derived from dextrans in immunochemical and related studies is reported extensively.

Dextran derivatives—ethers, esters, cross-linked gels, or dextrans covalently bonded with enzymes, proteins, and other organic substances—are subjects of voluminous research and patent literatures. Especially notable for versatile practicality are the dextran sulfates and diethylaminoethyl dextran. Complexes with metals, especially iron and calcium, have high content of the assimilable agent for alleviation of metal deficiency in man and domestic animals. The capacity of dextrans for specific complexation in solution with large proportions of metallic substances has industrial significance in the gel-precipitation process for recovery and fractionation of metallic ions and formation of particles of controlled shape and size.

BIBLIOGRAPHY ORGANIZATION

This bibliography is divided into sections, most of which have subsections. Sections I through XXVI cover research literature, sections XXVII through XXXV cover patents. The first section on microbiology and historical aspects (I) is followed by sections on preparation of native dextrans in growing cultures (II) and by enzymatic synthesis (III), with subsections on the synthesizing enzymes. Section IV, enzymatic degradation of dextrans, with subsections on dextranases, follows because of its role in production of partially depolymerized dextrans.

Section V is devoted to production of clinical sized dextran, methods for fractionation, and related analyses. Another type of synthesis of dextran follows in section VI, that is, stereospecific chemical synthesis. Section VII is on structural analysis of dextrans; a subsection covers use of dextranases in such analyses. Two sections, VIII and IX, follow on the oligosaccharide structural units of dextrans, which have important relations to both enzymatic degradation of dextrans and studies of their structure.

Considered next in section X and XI are the chemical and physiochemical properties of native dextrans and of fractions of lower molecular weight. Two following sections, XII and XIII, are concerned, respectively, with analytical methods for dextran and use of dextran in analysis and separation of other substances. In the next two sections, XIV and XV, with their numerous subsections, are derivatives of dextrans with inorganic and organic substances. Several of these derivatives have important biochemical properties and are effective therapeutical agents. Separate section XVI deals with dextrans and dextran derivatives covalently bonded to biochemical substances such as enzymes and proteins.

The next six sections (XVII-XXII) and their subsections are concerned with biochemical properties of dextrans, their interactions with biological materials *in vitro*, clinical uses, and physiological fate and effects *in vivo* when infused or ingested. A following section (XXIII) covers pertinent aspects of dextran in dental caries.

Section XXIV deals with roles and uses of dextrans in industries other than the pharmaceutical and fine chemicals, and section XXV lists books and reviews of broad interest. Other reviews that pertain to specific subjects are included in the corresponding section. References in the last section (XXVI) of the research literature part were acquired after entries in the preceding sections were terminated.

The subjects of several research literature sections also occur in patent sections. Information is not duplicated, however, but is complementary. Patents, although based on the fundamental research developments, provide details of practical, process technology not found in research publications. Patents, even though they might be expired, provide information or principles transferable to newer developments within the field.

Three main types of references included are as follows:

- Dextran is the major substance or subject dealt with throughout the article.
- Dextran has a minor role but is the basis for significant data, interpretation, or discussion.

• Dextran is not dealt with, but the article is one of an important series on dextran or coordinates principles involved in a series on dextran.

References and patents are classified on the major subject content or the information considered most significant. In some instances, the class may not be apparent in the title.

Supplementary references in the research literature have been included freely to provide as much information as possible to the reader. When the original source is not available or employs a language not generally understood, references to various abstract journals, especially "Chemical Abstracts" and "Microbiology Abstracts," provide information conveniently. These abstract sources are cited, also, to the few articles not seen in the original by the author. Likewise, cited are translations to English from Japanese, Polish, or Russian publications. In some instances, publications from a foreign source have been duplicated in English journals.

Many publications have information significant for more than one section. When justified by the subject content, a few references have been listed in both sections. Usually, however, the reference number is listed in cross-references at the end of the section of secondary interest; practicality has limited the extent of cross-referencing.

Abbreviations of journal names and other publications are those designated in "Chemical Abstracts Service Sources Index (CASSI) 1907-1974 Cumulative."

For a number of subsections, only selected references are cited. The type of study in section IV D justifies recognition but not exhaustive coverage. For sections VIII H and VIII I, references cited are representative of the historical and theoretical significance of the subjects. For sections XIII A, XIV C, XIV G, and XV E, the literature is so extensive as to make complete coverage impractical; therefore, sources of complete information are cited. For subsections XIV E, XIV G, XV E, XXI A, and XXII, more extensive coverage is not compatible with our objectives. The main criteria for selecting these references have been that initial, fundamental research, which stimulated later developments, is reported. The reports are representative of the major and most significant lines of resultant research or development.

Throughout the bibliography, attention has been given to the initial discoveries and basic research and to the lines of ensuing growth and extension into other areas.

Within the literature references and patents, items are numbered consecutively, but the numbers are not continuous between the two parts.

The first research publication included is dated 1861 (reference 82). Earlier publications are cited in several references in sections I and II, as is indicated by notes of the author added to the references. The first patents included are dated 1940 (references 847-854). Consistent coverage for this publication of literature references and patents concluded in July 1976. Literature references of notable import published, or scheduled for publication, up to July 1977, are included in section XXVI, Addenda.

BIBLIOGRAPHY OF RESEARCH LITERATURE

Classification and Subject Content of Sections

I. History and microbiology

Dextran-producing bacteria: early discoveries, occurrences, metabolic needs, and colony types. Cariogens are excluded here but included in section XXIII.

(1) ALFORD, J. A., AND C. S. MCCLESKEY. 1942. SOME OBSERVATIONS ON BACTERIA CAUSING SLIME IN CANE JUICE. PROC. L. ACAD. SCI. 6:36-42.

(2) ARNOLD, B. H., AND A. N. HALL. 1955. EFFECT OF PENICILLIN AND OF STREPTOMYCIN ON CERTAIN SPECIES OF LACTOBACILLUS AND AEROBACTER. J. INST. BREW. (LONDON) 61:44-45.

(3) ------ AND A. N. HALL. 1956. EFFECT OF STREPTOMYCIN ON ACETOBACTER CAPSULATUM AND ITS ASSOCIATED DEXTRAN-DEXTRINASE ENZYME SYSTEM. NATURE (LONDON) 177:44.

(4) ARRHENIUS, A. 1945. PHYSIOLOGICAL EXPERIMENTS WITH LEUCONOSTOC MESENTEROIDES. SOCKER HANDL. 1:245-252. ALSO IN CHEM. ABSTR. 1946. 40:1338.

(5) ------. 1946. SOME EXPERIMENTS WITH LEUCONOSTOC MESENTEROIDES. INT. SUGAR J. 48:269-271.

(6) BAENS-ARCEGA, L., AND F. M. YENKO. 1947. SOME FACTORS AFFECTING PRODUCTION OF DEXTRAN FROM CANE SUGAR BY LEUCONOSTOC DEXTRANICUM. PHILIPP. J. SCI. 77:39-52. ALSO IN CHEM. ABSTR. 1949. 42:7828.

(7) ------ AND A. L. ARGUELLES. 1961. THE DEXTRAN-LEUCONOSTOC FROM PHILIPPINE CABBAGE: SOME FACTORS INFLUENCING DEXTRAN FORMATION AND SPECIFIC IDENTITY OF THE ORGANISM. PHILIPP. J. SCI. 89:23-37.

(8) BAILEY, R. W., AND A. E. OXFORD. 1959. THE NATURE OF THE CAPSULAR POLYSACCHARIDES OF THE DEXTRAN-PRODUCING ORGANISMS LEUCONOSTOC MESENTEROIDES, L. DEXTRANICUM AND STREPTOCOCCUS BOVIS. J. GEN. MICROBIOL. 20:258-266.

(9) BARNES, I. J., H. W. SEELEY, JR., AND P. J. VAN DEMARK. 1961. NUTRITION OF STREPTOCOCCUS BOVIS IN RELATION TO DEXTRAN FORMATION. J. BACTERIOL. 82:85-93.

(10) BARZOTTI, A. M., AND C. S. MCCLESKEY. 1956. THE DISSIMILATION OF LEVULOSE BY FOUR TYPES OF LEUCONOSTOC MESENTEROIDES [ABSTRACT G79]. BACTERIOL. PROC. 59.

(11) BECHAMP, A. 1881. [ON VISCOSE, A GUMMY PRODUCT OF MUCILAGINOUS FERMENTATION] (IN GERMAN). Z. VER. RUEBENZUCKERIND. 31:850-853.

(12) BEIJERINCK, M. W. 1912. [MUCILAGINOUS SUBSTANCES OF THE CELL WALL PRODUCED FROM CANE SUGAR BY BACTERIA] (IN GERMAN). FOLIA MICROBIOL. (DELFT) 1:377- ALSO IN CHEM. ABSTR. 1914. 8:944.

(13) BIENVENU, R., AND C. S. MCCLESKEY. 1950. THE AMINO ACID REQUIREMENTS OF LEUCONOSTOC MESENTEROIDES ISOLATED FROM SUGAR CANE JUICE. PROC. LA. ACAD. SCI. 13:13-18.

(14) BOLOTNIKOVA, F. I., T. V. POLUSHINA, V. M. KUZNETSOVA, AND V. P. SIROTKINA. 1975. [USE OF A FREEZE-DRIED CULTURE OF LEUCONOSTOC MESENTEROIDES FOR DEXTRAN SYNTHESIS] (IN RUSSIAN). PRIKL. BIOKHIM. MIKROBIOL. 11:141-144. ALSO IN CHEM. ABSTR. 1975. 82:137715Z.

(15) BOUILLENNE, R. 1938. [THE CULTURE OF SUGAR-HOUSE GUM IN THE LABORATORY] (IN FRENCH). SUCR. BELGE 57:201-207. ALSO IN CHEM. ABSTR. 1938. 32:3652.

(16) BROWN, R. G., B. LINDBERG, AND E. J. LAISHLEY. 1975. CHARACTERIZATION OF TWO RESERVE GLUCANS FROM CLOSTRIDIUM PASTEURIANUM. CAN. J. MICROBIOL. 21:1136-1138.

(17) BROWNE, C. A., JR. 1906. THE FERMENTATION OF SUGAR-CANE PRODUCTS. (INCLUDES EARLY HISTORY OF FERMENTATION IN SUGAR-CANE PRODUCTS.) J. AM. CHEM SOC. 28:453-469.

(18) CARLSON, W. W., AND V. WHITESIDE-CARLSON. 1949. DIRECT UTILIZATION OF SUCROSE BY LEUCONOSTOC [AN ABSTRACT]. FED. PROC. 8(1):189.

(19) ------ AND V. WHITESIDE-CARLSON. 1949. BIOTIN-CARBOHYDRATE INTERRELATIONSHIPS IN THE METABOLISM OF LEUCONOSTOC. PROC. SOC. EXP. BIOL. MED. 71:416-419.

(20) ------, V. WHITESIDE-CARLSON, AND K. KOSPETOS. 1950. FATTY ACIDS AS BIOTIN SUBSTITUTES FOR LEUCONOSTOC [AN ABSTRACT]. FED. PROC. 9(1):159.

(21) CARRUTHERS, A., AND E. A. COOPER. 1936. ENZYME FORMATION AND POLYSACCHARIDE SYNTHESIS BY BACTERIA. II. BIOCHEM. J. 30:1001-1009.

(22) COLIN, H., AND M. SIMONET. 1929. [ON THE VISCOUS FERMENTATION OF SUGAR BEET SIRUP] (IN FRENCH). COMPT. REND. 188:943-945.

(23) ------ AND H. BELVAL. 1939. [THE GUM OF CANE SUGAR] (IN FRENCH). BULL. ASSOC. CHIM. SUCR. DISTILL. IND. AGRIC. FR. COLON. 56:481-490. ALSO IN CHEM. ABSTR. 1939. 33:6633.

(24) CUCCI, M. W. 1958. THE CHEMISTRY OF ROPY MILK. N.Y. STATE ASSOC. MILK FOOD SANIT. ANNU. REP. 32:39-43. ALSO IN CHEM. ABSTR. 1960. 54:25351B.

(25) DAIN, J. A., A. L. NEAL, AND H. W. SEELEY, JR. 1956. THE EFFECT OF CARBON DIOXIDE ON POLYSACCHARIDE PRODUCTION BY STREPTOCOCCUS BOVIS. J. BACTERIOL. 72:209-213.

(26) DEIBEL, R. H., AND C. F. NIVEN, JR. 1959. MICROBIOLOGY OF MEAT CURING II. CHARACTERISTICS OF A LACTOBACILLUS OCCURRING IN HAM CURING BRINES WHICH SYNTHESIZES A POLYSACCHARIDE FROM SUCROSE. APPL. MICROBIOL. 7:138-141.

(27) DRUCKER, D. B., AND T. H. MELVILLE. 1969. COMPUTER CLASSIFICATION OF STREPTOCOCCI, MOSTLY OF ORAL ORIGIN. NATURE (LONDON) 221:664.

(28) DUNICAN, L. K., AND H. W. SEELEY, JR. 1965. EXTRACELLULAR POLYSACCHARIDE SYNTHESIS BY MEMBERS OF THE GENUS LACTOBACILLUS: CONDITIONS FOR FORMATION AND ACCUMULATION. J. GEN. MICROBIOL. 40:297-308.

(29) EVANS, T. H., AND H. HIBBERT. 1946. BACTERIAL POLYSACCHARIDES. ADV. CARBOHYDR. CHEM. 2:203-233.

(30) FABIAN, F. W., AND R. H. HENDERSON. 1950. LEUCONOSTOC MESENTEROIDES AS THE CAUSE OF ROPINESS IN CANNED PEACHES. FOOD RES. 15(5):415-419.

(31) FAVILLE, L. W., AND E. C. HILL. 1952. ACID TOLERANT BACTERIA IN CITRUS JUICES. FOOD RES. 17:281-287.

(32) FELTZ, E. 1876. [ON THE PRODUCTION OF GUM IN THE JUICE AND SIRUP OF SUGAR BEETS] (IN FRENCH), SUCR. INDIG. 11:232-234; 379-383.

(33) FERNBACH, A., M. SCHOEN, AND S. HAGIWARA. 1925. [SOME OBSERVATIONS ON THE FORMATION OF GUMS BY BACTERIA] (IN FRENCH). COMPT. REND. SOC. BIOL. 92:1418-1419.

(34) GAINES, S., AND G. L. STAHLY. 1943. THE GROWTH REQUIREMENTS OF LEUCONOSTOC MESENTERIOIDES AND PRELIMINARY STUDIES ON ITS USE AS AN ASSAY AGENT ON SEVERAL MEMBERS OF THE VITAMIN B COMPLEX. J. BACTERIOL. 46:441-449.

(35) GARVIE, E. I. 1967. THE GROWTH FACTOR AND AMINO ACID REQUIREMENTS OF SPECIES OF THE GENUS LEUCONOSTOC, INCLUDING LEUCONOSTOC PARAMESENTEROIDES (SP.NOV.) AND LEUCONOSTOC OENOS. J. GEN. MICROBIOL. 48:439-447.

(36) GIGLIO, D. M., AND C. S. MCCLESKEY. 1953. THE FERMENTATION OF SUCROSE BY LEUCONOSTOC MESENTEROIDES. J. BACTERIOL. 65:75-78.

(37) HARRIS, R. H., AND R. MITCHELL. 1968. RELATIONSHIP BETWEEN EXTRACELLULAR POLYMER PRODUCTION AND BACTERIAL AGGREGATION [ABSTRACT G38]. BACTERIOL. PROC. 34.

(38) HAYNES, W. C., L. J. WICKERHAM, AND C. W. HESSELTINE. 1955. MAINTENANCE OF CULTURES OF INDUSTRIALLY IMPORTANT MICROORGANISMS. APPL. MICROBIOL. 3:361-368.

(39) HAYS, G. L. 1951. ISOLATION, CULTIVATION, AND IDENTIFICATION OF ORGANISMS WHICH HAVE CAUSED SPOILAGE IN FROZEN CONCENTRATED ORANGE JUICE. PROC. FL. STATE HORTIC. SOC. 135-137.

(40) HEATHECOTE, J. G., AND J. PACE. 1950. INHIBITING OF THE GROWTH OF LEUCONOSTOC MESENTEROIDES BY THE TOXIC FACTOR FROM 'AGENIZED' ZEIN: REVERSAL BY L. GLUTAMINE. NATURE (LONDON) 166:353-354.

(41) HEHRE, E. J., AND J. M. NEILL. 1946. FORMATION OF SEROLOGICALLY REACTIVE DEXTRANS BY STREPTOCOCCI FROM SUBACUTE BACTERIAL ENDOCARDITIS (INCLUDES A REVIEW OF EARLY RESEARCH ON DEXTRAN-PRODUCING STRAINS.) J. EXP. MED. 83:147-162.

(42) ------. 1948. DEXTRAN-FORMING STREPTOCOCCI FROM THE BLOOD IN SUBACUTE ENDOCARDITIS AND FROM THE THROATS OF HEALTHY PERSONS. BULL. N.Y. ACAD. MED. 24:543-544.

(43) HESSELTINE, C. W., W. C. HAYNES, L. J. WICKERHAM, AND J. J. ELLIS. 1968. HISTORY, POLICY, AND SIGNIFICANCE OF THE ARS CULTURE COLLECTION. CULT. COLLECT. MICROORGANISMS PROC. INT. CONF. (TOKYO) 21-38.

(44) HUCKER, G. J., AND C. S. PEDERSON. 1930. STUDIES ON THE COCCACEAE XVI. THE GENUS LEUCONOSTOC. N.Y. AGRIC. EXP. ST. TECH. BULL. 167. 80 PP.

(45) ------. 1932. STUDIES ON THE COCCACEAE XVII. AGGLUTINATION AS A MEANS OF DIFFERENTIATING THE SPECIES OF STREPTOCOCCUS AND LEUCONOSTOC. N.Y. AGRIC. EXP. ST. TECH. BULL. 190. 28 PP.

(46) ------ AND C. S. PEDERSON. 1942. A REVIEW OF THE MICROBIOLOGY OF COMMERCIAL SUGAR AND RELATED SWEETENING AGENTS. FOOD RES. 7:459-480.

(47) JAFRI, J., R. ZUBERI, S. ZAIDI, AND H. ALI. 1975. PREPARATION AND CHARACTERIZATION OF DEXTRAN FROM SUCROSE BY THE ACTION OF A LOCALLY ISOLATED STRAIN OF LEUCONOSTOC MESENTEROIDES. (NEW SOURCES OF GROWTH FACTORS.) PAK. J. SCI. IND. RES. 17(6):219-222.

(48) JANUSZEWICZ, I. 1955. [CHANGES IN THE BIOCHEMICAL PROPERTIES OF A LEUCONOSTOC MESENTEROIDES STRAIN IN RELATION TO CONDITIONS OF STORAGE] (IN POLISH). ACTA MICROBIOL. POL. 4(3):205-217. (ENGLISH TRANSL. IN SELECTED ARTICLES, OTS 60-21570:41-54, 1962.) ALSO IN CHEM. ABSTR. 1956. 50:14058F.

(49) ------. 1956. [BIOSYNTHESIS OF DEXTRAN BY VARIOUS LEUCONOSTOC MESENTEROIDES STRAINS] (IN POLISH). ACTA MICROBIOL. POL. 5(1-2):217-244. (ENGLISH TRANSL. IN SELECTED ARTICLES, OTS 60-21570:32-40, 1962.)

(50) ------. 1957. [CHANGES IN THE BIOCHEMICAL PROPERTIES OF A LEUCONOSTOC MESENTEROIDES STRAIN IN RELATION TO CONDITIONS OF STORAGE] (IN POLISH). ACTA MICROBIOL. POL. 6(4):367-376. (ENGLISH TRANSL. IN SELECTED ARTICLES, OTS 60-21570:1-10, 1962.)

(51) JOHNSON, M. K., AND C. S. MCCLESKEY. 1957. STUDIES ON THE AEROBIC CARBOHYDRATE METABOLISM OF LEUCONOSTOC MESENTEROIDES. J. BACTERIOL. 74:22-25.

(52) JUBERT, P. 1874. [NOTE ON THE GUM OF SUGARHOUSES] (IN FRENCH), SUCR. INDIG. 9:174-177; 199-200.

(53) KANIUGA, B., AND A. BLECHERT. 1958. [SACCHAROSE UTILIZATION IN DEXTRAN SYNTHESIS BY LEUCONOSTOC MESENTEROIDES STRAIN "L."] (IN POLISH). ACTA MICROBIOL. POL. 7(2):131-138. (ENGLISH TRANSL. IN SELECTED ARTICLES, OTS 60-21570:55-62, 1962.)

(54) KIRCHER, J. 1839. [ON MANNITE AND SLIME FROM SUGAR BEETS] (IN GERMAN). JUSTUS LIEBIGS ANN. CHEM. 31:337-339.

(55) KOBAYASHA, T. 1944. MUCOUS FERMENTATION OF SUCROSE BY LACTOBACILLUS MUSICUS ISOLATED FROM TOBACCO LEAVES. J. AGRIC. CHEM. SOC. JAPAN 20:60-64. ALSO IN CHEM. ABSTR. 1949. 42:3810A.

(56) KOSER, S. A., AND G. J. KASAI. 1950. A FURTHER INVESTIGATION OF THE RESPONSE OF LEUCONOSTOC TO NICOTINIC ACID AND RELATED COMPOUNDS. J. INFECT. DIS. 86:95-102.

(57) KRAMER, E. 1889. [STUDIES ON THE VISCOUS FERMENTATION] (IN GERMAN). MONATSH. CHEM. 10:467-505.

(58) LANGSTON, C. W., AND C. BOUMA. 1960. A STUDY OF THE MICROORGANISMS FROM GRASS SILAGE II. THE LACTOBACILLI. APPL. MICROBIOL. 8:223-234.

(59) LEIVA-QUIROS, A., AND C. S. MCCLESKEY. 1947. THE APPLICATION OF BACTERIOPHAGE AND SEROLOGY IN THE DIFFERENTIATION OF STRAINS OF LEUCONOSTOC MESENTEROIDES. J. BACTERIOL. 54:709-713.

(60) LIESENBERG, C., AND W. ZOPF. 1892. [ON THE SO-CALLED FROG SPAWN (LEUCONOSTOC) OF EUROPEAN BEET-SUGAR AND JAVANESE CANE-SUGAR MILLS] (IN GERMAN). CENTR. PRAKT. PARASIT. 12:659-661.

(61) LIPPMANN, E. O. VON. 1904. DIE CHEMIE DER ZUCKERTEN, 3RD. [IN GERMAN]. (INCLUDES A COMPREHENSIVE SUMMARY OF EARLY RESEARCH ON DEXTRANS AND THEIR PROPERTIES.) F. VIEWEG UND SOHN, BRAUNSCHWEIG, 2 VOLS.

(62) LOGINOVA, L. I., V. P. MANUJLOVA, V. P. TOLSTIKOV. 1974. [CONTENT OF FREE AMINO ACIDS IN PEPTONE AND THE DYNAMICS OF THEIR UTILIZATION IN THE MICROBIOLOGICAL SYNTHESIS OF DEXTRAN] (IN RUSSIAN). KHIM. FARM. ZH. 8(4):49-51. ALSO IN MICROBIOL. ABSTR. (1975) SEC. A, 10(4):10A2213.

(63) MANTLE, P. G. 1965. HYPERCAPSULATED GROWTH OF LEUCONOSTOC MESENTEROIDES IN THE SPHACELIAL STAGE OF CLAVICEPS PURPUREA. ANTONIE VAN LEEUWENHOEK 31:414-422.

(64) MAYER, H. D. 1939. DAS "TIBI"-KONSORTIUM NEBST EINEM BEITRAG ZUR KENNTNIS DER BAKTERIEN-DISSOZIATION. DRUK NAAMLOOZE VENNOOTSCHAP, W. M. MEINEME, DELFT. 188 PP.

(65) MAYEUX, P. A., AND A. R. COLMER. 1960. STUDIES ON MICROFLORA ASSOCIATED WITH SACCHARUM OFFICINARIUM. SUGAR J. 23(7):28-32.

(66) ------ AND A. R. COLMER. 1961. SELECTIVE MEDIUM FOR LEUCONOSTOC DETECTION. J. BACTERIOL. 81:1009-1011.

(67) MCCLESKEY, C. S., L. W. FAVILLE, AND R. O. BARNETT. 1947. CHARACTERISTICS OF LEUCONOSTOC MESENTEROIDES FROM CANE JUICE. J. BACTERIOL. 54:697-708.

(68) MONOYER, A. 1938. [MORPHOLOGY OF THE VEGETATIVE COMPLEX DESIGNATED AS SUGARHOUSE GUM] (IN FRENCH). SUCR. BELGE 57:222-228. ALSO IN CHEM. ABSTR. 1938. 32:3652.

(69) MUNDT, J. O., AND L. D. PRYOR. 1952. SLIME IN THE CURING ROOM: ITS CAUSE AND CONTROL. QUICK FROZEN FOODS 14:133-135.

(70) MURDOCK, D. J., V. G. TROY, AND J. F. FOLINAZZO. 1952. DEVELOPMENT OF OFF-FLAVOR IN 20 DEGREE BRIX ORANGE CONCENTRATE INOCULATED WITH CERTAIN STRAINS OF LACTOBACILLI AND LEUCONOSTOC. FOOD TECHNOL. 6:127-129.

(71) ------, J. F. FOLINAZZO, AND C. H. BROKAW. 1953. SOME OBSERVATIONS OF GUM FORMING ORGANISMS FOUND ON FRUIT SURFACES. PROC. FL. STATE HORTIC. SOC. 278-281.

(72) NICHOLSON, R. I., AND B. LILIENTHAL. 1959. FORMATION OF A POLYSACCHARIDE IN SUGAR CANE. AUST. J. BIOL. SCI. 12:192-203.

(73) NIVEN, C. F., JR., K. L. SMILEY, AND J. M. SHERMAN. 1941. THE POLYSACCHARIDES SYNTHESIZED BY STREPTOCOCCUS SALIVARIUS AND STREPTOCOCCUS BOVIS. J. BIOL. CHEM. 140:105-109.

(74) ------, Z. KIZIUTA, AND J. C. WHITE. 1946. SYNTHESIS OF A POLYSACCHARIDE FROM SUCROSE BY STREPTOCOCCUS S.B.E. J. BACTERIOL. 51:711-716.

(75) ------, A. G. CASTELLANI, AND V. ALLANSON. 1949. A STUDY OF LACTIC ACID BACTERIA THAT CAUSE SURFACE DISCOLORATIONS OF SAUSAGES. J. BACTERIOL. 58:633-641.

(76) OERSKOV, J. 1930. [INVESTIGATION OF AN ABUNDANT POLYSACCHARIDE-PRODUCING STREPTOCOCCUS] (IN GERMAN). ZENTRALBL. BAKTERIOL. PARASITENKD. ORIG. 119:88-95.

(77) ------ AND K. A. POULSEN. 1931. [THE FREQUENT OCCURRENCE IN THE HUMAN THROAT OF STREPTOCOCCI WHICH, BY GROWTH ON SOLID SURFACES, PRODUCE ABUNDANT POLYSACCHARIDE FROM SUCROSE- (OR RAFFINOSE-) CONTAINING SUBSTRATES] (IN GERMAN). ZENTRALBL. BAKTERIOL. PARASITENKD. ORIG. 120:125-127.

(78) OLSEN, E. 1948. STUDIES OF BACTERIA IN DANISH FRUIT-WINES. ANTONIE VAN LEEUWENHOEK 14:1-28.

(79) OXFORD, A. E. 1958. THE NUTRITIONAL REQUIREMENTS OF RUMEN STRAINS OF STREPTOCOCCUS BOVIS CONSIDERED IN RELATION TO DEXTRAN SYNTHESIS FROM SUCROSE. J. GEN. MICROBIOL. 19:617-623.

(80) PALO, M. A., AND M. M. LAPUZ. 1954. ON A NEW GUM FORMING STREPTOCOCCUS, WITH STUDIES ON THE OPTIMAL CONDITIONS FOR THE SYNTHESIS OF THE GUM AND ITS PRODUCTION IN COCOANUT WATER. PHILIPP. J. SCI. 83:327-357.

263-709 O - 78 - 2

(81) PAPP, M. 1952. A PREVIOUSLY UNKNOWN DEXTRAN-PRODUCING BACTERIUM. CUKORIPAR 5:85-90. ALSO IN CHEM. ABSTR. 1953. 47:11319D.

(82) PASTEUR, L. 1861. [ON THE VISCOUS FERMENTATION AND THE BUTYROUS FERMENTATION] (IN FRENCH). BULL. SOC. CHIM. PARIS 30-31.

(83) PEAT, S., M. STACEY, AND E. SCHLUECHTERER. 1938. THE POLYSACCHARIDE PRODUCED FROM SUCROSE BY LEUCONOSTOC DEXTRANICUM. NATURE (LONDON) 141:876.

(84) PEDERSON, C. S., AND M. N. ALBURY. 1955. VARIATION AMONG THE HETEROFERMENTATIVE LACTIC ACID BACTERIA. J. BACTERIOL. 70:702-708.

(85) PERQUIN, L. H. C. 1940. ON THE INCIDENTAL OCCURRENCE OF ROD-SHAPED, DEXTRAN PRODUCING BACTERIA IN A BEET-SUGAR FACTORY. ANTONIE VAN LEEUWENHOEK 6:227-249.

(86) PRYCE-JONES, J. 1952. "STRINGINESS" IN HONEY AND IN SUGAR SYRUP FED TO BEES. BEE WORLD 33(9):147-150, 154, 155.

(87) ROREM, E. S. 1955. UPTAKE OF RUBIDIUM AND PHOSPHATE IONS BY POLYSACCHARIDE-PRODUCING BACTERIA. J. BACTERIOL. 70:691-701.

(88) RUSHING, N. B., M. K. VELDHUIS, AND V. J. SENN. 1956. GROWTH RATES OF LACTOBACILLUS AND LEUCONOSTOC SPECIES IN ORANGE JUICE AS AFFECTED BY PH AND JUICE CONCENTRATION. APPL. MICROBIOL. 4:97-100.

(89) SANCHEZ-MARROQUIN, A., AND L. ARCINIEGA. 1948. THE MICROBIOLOGY OF PULQUE III. THE DEXTRAN PRODUCED BY LEUCONOSTOC OF AQUAMIEL. AN. ESC. NA. CIENC. BIOL. MEXICO CITY 5:19-27. ALSO IN CHEM. ABSTR. 1949. 43:5531.

(90) ------ AND H. RODRIGUEZ. 1948. THE MICROBIOLOGY OF PULQUE IV. THE SEROLOGICAL PROPERTIES OF TWO DEXTRANS FROM LEUCONOSTOC. AN. ESC. NA. CIENC. BIOL. MEXICO CITY 5:29-37. ALSO IN CHEM. ABSTR. 1949. 43:5532.

(91) ------ AND P. H. HOPE. 1953. AGAVE JUICE: FERMENTATION AND CHEMICAL COMPOSITION STUDIES OF SOME SPECIES. AGRIC. FOOD. CHEM. 1:246-249.

(92) SCARR, M. P. 1949. PRODUCTION OF POLYSACCHARIDES BY ROD-SHAPED BACTERIA IN SUGAR FACTORY AND REFINERY PROCESSES. PROC. SOC. APPL. BACTERIOL. 2:100-104.

(93) SCHEIBLER, C. 1874. [INVESTIGATION ON THE NATURE OF THE GELATINOUS EXCRETION (SO-CALLED FROGS' SPAWN) WHICH IS OBSERVED IN PRODUCTION OF BEET-SUGAR JUICE] (IN GERMAN). Z. VER. DTSCH. ZUCKER-IND. 24:309.

(94) SEL'TSOVSKAYA, G. S. 1958. [THE BIOLOGICAL SYNTHESIS OF NATIVE DEXTRAN--THE FIRST STAGE IN THE PRODUCTION OF THE PLASMA SUBSTITUTE POLYGLUCIN] (IN RUSSIAN). PROBL. HEMATOL. PERELIV. KROVI 3(3):52-56. ALSO IN PROBL. HEMATOL. BLOOD TRANSFUS. (USSR) [IN ENGLISH] 3(3):195-199. ALSO IN CHEM. ABSTR. 1959. 53:13265G.

(95) SHARPE, M. E., E. I. GARVIE, AND R. H. TILBURY. 1972. SOME SLIME-FORMING HETEROFERMENTATIVE SPECIES OF THE GENUS LACTOBACILLUS. APPL. MICROBIOL. 23:389-397.

(96) SIERRA, R., AND C. S. MCCLESKEY. 1956. SEROLOGICAL STUDIES ON LEUCONOSTOC MESENTEROIDES. J. BACTERIOL. 72:816-820.

(97) SMITH, M. A., AND C. F. NIVEN, JR. 1957. THE OCCURRENCE OF LEUCONOSTOC MESENTEROIDES IN POTATO TUBERS AND GARLIC CLOVES. APPL. MICROBIOL. 5:154-155.

(98) SMITH, P. B., AND A. L. POLLARD. 1952. CHROMATOGRAPHIC METHODS IN THE STUDY OF POLYSACCHARIDE. J. BACTERIOL. 63:129-132.

(99) SNELL, E. E., AND H. K. MITCHELL. 1941. PURINE AND PYRIMIDINE BASES AS GROWTH SUBSTANCES FOR LACTIC ACID BACTERIA. PROC. NAT. ACAD. SCI. U.S. 27:1-7.

(100) TARR, H. L. A. 1931. STUDIES IN BACTERIAL METABOLISM. (INCLUDES A REVIEW OF EARLY RESEARCH ON DEXTRAN-PRODUCING BACTERIA AND THEIR DEXTRANS.) PH.D. THESIS. MCGILL UNIVERSITY, 140 PP. MONTREAL, QUEBEC, CANADA.

(101) TISELIUS, A., AND B. INGELMAN. 1942. [COLLOIDCHEMICAL INVESTIGATIONS OF (SUGAR BEET) EXTRACTS IN UPPSALA DURING 1941] (IN SWEDISH). FOERH. SVEN. SOCKERFABRIKSDIRIGENTERNAS FOEREN. SAMMANTRAEDEN 1942, II, 16 PP. ALSO IN CHEM. ABSTR. 1944. 38:4465.

(102) TITTSLER, R. P., C. S. PEDERSON, E. E. SNELL, AND OTHERS. 1952. SYMPOSIUM ON LACTIC ACID BACTERIA. BACTERIOL. REV. 16:227-260.

(103) UCHIYAMA, H., AND K. AMANO. 1959. THE MECHANISM OF THE SLIME FORMATION ON SUGARED KAMABOKO. II. IDENTIFICATION OF DEXTRAN WITH THE USE OF AN ENZYME PREPARATION FROM PENICILLIUM FUNICULOSUM. NIPPON SUISAN GAKKAISHI 24:840-847. ALSO IN CHEM. ABSTR. 1959. 53:18117G.

(104) VALAKHANOVICH, A. I., L. A. VITKOVSKAYA, R. V. ZARETSKAYA, AND OTHERS. 1975. USE OF FREEZE DRYING FOR PRESERVATION OF THE COMMERCIAL STRAIN OF LEUCONOSTOC MESENTEROIDES SF-4. KHIM. FARM. ZH. 9(3):39-43. ALSO IN CHEM. ABSTR. 1975. 83:7106M.

(105) VAN TIEGHEM, PH. 1878. [ON SUGAR-MILL GUM] (IN FRENCH). ANN. SCI. NAT. BOT. BIOL. VEG. 7:180-203.

(106) ------. 1880. [GELATINOUS MATTER IN BEETS] (IN GERMAN). BIEDERMANN'S ZENTRALBL. 337-339. ALSO IN J. CHEM. SOC. ABSTR. 38:908-909.

(107) VASSEUR, A. 1924. PRESENCE OF DEXTRANS IN WINES, AND ITS CONSEQUENCES. REV. PATHOL. COMP. HYG. GEN. 24:240; BULL. SOC. HYG. ALIMENT. 12:441-442. ALSO IN CHEM. ABSTR. 1925. 19:374.

(108) VAVRA, A., AND I. VAVRA. 1964. BIOSYNTHESIS OF DEXTRAN FOR THE PRODUCTION OF BLOOD PLASMA SUBSTITUTE. II. LABORATORY-SCALE CULTIVATION OF LEUCONOSTOC MESENTEROIDES PRODUCTION ORGANISM. Z. ZUCKERIND. 89:628-631.

(109) WARD, H. M. 1892. THE GINGER-BEER PLANT, AND THE ORGANISMS COMPOSING IT: A CONTRIBUTION TO THE STUDY OF FERMENTATION-YEASTS AND BACTERIA. R. SOC. LONDON PHILOS. TRANS. SER. B, 183:125-197.

(110) WHITESIDE-CARLSON, V., AND W. W. CARLSON. 1949. THE VITAMIN REQUIREMENTS OF LEUCONOSTOC FOR DEXTRAN SYNTHESIS. J. BACTERIOL. 58:135-141.

(111) ------ AND W. W. CARLSON. STUDIES OF THE EFFECT OF PARAAMINOBENZOIC ACID, FOLIC ACID, AND SULFANILAMIDE ON DEXTRAN SYNTHESIS BY LEUCONOSTOC. J. BACTERIOL. 58:143-149.

(112) ------ AND C. L. ROSANO. 1951. THE NUTRITIONAL REQUIREMENTS OF LEUCONOSTOC DEXTRANICUM FOR GROWTH AND DEXTRAN SYNTHESIS. J. BACTERIOL. 62:583-589.

(113) ------, W. STARNES, C. L. ROSANO, AND W. W. CARLSON. 1951. NON-SPECIFICITY OF BIOTIN ACTIVITY FOR LEUCONOSTOC. PROC. SOC. EXP. BIOL. MED. 77:344-348.

(114) ------, L. V. FARINA, AND W. W. CARLSON. 1954. POLYSACCHARIDE SYNTHESIS BY A VARIANT OF LEUCONOSTOC DEXTRANICUM. J. BACTERIOL. 68:135-139.

(115) WRIGHT, D. E. 1960. THE METABOLISM OF CARBON DIOXIDE BY STREPTOCOCCUS BOVIS. J. GEN. MICROBIOL. 22:713-725.

SEE ALSO: 126 130 136 138 552 764
765 768 769 773 774 1041 THROUGH 1043
2383 2385 2410 2487 2513

II. Preparation of native dextrans in growing cultures

For industrial production, see section V A.

(116) ABDEL-AKHER, M., A. S. EL-NAWAWY, AND A. M. MOUSTAFA. 1973. PRODUCTION OF DEXTRAN BY MICROORGANISMS. AGRIC. RES. REV. 51(2)::177-184. ALSO IN CHEM. ABSTR. 1974. 81:8976V.

(117) BAILEY, R. W., S. A. BARKER, E. J. BOURNE, AND M. STACEY. 1955. SYNTHESIS OF OLIGOSACCHARIDES BY GROWING CULTURES OF BETACOCCUS ARABINOSACEOUS. NATURE (LONDON) 175:635.

(118) ------ AND A. E. OXFORD. 1958. PRE-REQUISITES FOR DEXTRAN PRODUCTION BY STREPTOCOCCUS BOVIS. NATURE (LONDON) 182:185-186.

(119) ------ AND A. E. OXFORD. 1958. A QUANTITATIVE STUDY OF THE PRODUCTION OF DEXTRAN FROM SUCROSE BY RUMEN STRAINS OF STREPTOCOCCUS BOVIS. J. GEN. MICROBIOL. 19:130-145.

(120) BOLOTNIKOVA, F. I., T. V. POLUSHINA, I. YU. MARKOVA, AND OTHERS. 1970. THE INFLUENCE OF PEPTONE ON THE MICROBIOLOGICAL SYNTHESIS OF DEXTRAN. KHIM. FARM. ZH. 4(9):34-38. ALSO IN MICROBIOL. ABSTR. 1971. SEC. A, 6(13):A11648.

(121) DVOLAITSKAYA-BARYSHOVA, K. M., AND G. S. SEL'TSOVSKAYA. 1956. THE BIOSYNTHESIS OF CRUDE DEXTRAN FOR USE IN THE PLASMA SUBSTITUTE "POLYGLYUKIN". PROBL. GEMATOL. PERELIV. KROVI 1(1):47-48. ALSO IN CHEM. ABSTR. 1957. 51:4650C.

(122) FORSYTH, W. G. C., AND D. M. WEBLEY. 1948. A METHOD FOR STUDYING THE CARBOHYDRATE METABOLISM OF MICRO-ORGANISMS. NATURE (LONDON) 162:150-151.

(123) ------ AND D. M. WEBLEY. 1950. THE REDUCING SUGARS LIBERATED DURING THE BACTERIAL SYNTHESIS OF POLYSACCHARIDES FROM SUCROSE. J. GEN. MICROBIOL. 4:87-91.

(124) HAMDY, M. K., E. GARDNER, G. L. STAHLY, H. H. WEISER, AND Q. VAN WINKLE. 1954. FACTORS AFFECTING PRODUCTION AND CLARIFICATION OF DEXTRAN. OHIO J. SCI. 54:317-328.

(125) HEHRE, E. J., AND D. M. HAMILTON. 1949. BACTERIAL CONVERSION OF DEXTRIN INTO A POLYSACCHARIDE WITH THE SEROLOGICAL PROPERTIES OF DEXTRAN. PROC. SOC. EXP. BIOL. MED. 71:336-339.

(126) ------ (WITH THE ASSISTANCE OF D. M. HAMILTON). 1951. THE BIOLOGICAL SYNTHESIS OF DEXTRAN FROM DEXTRINS. J. BIOL. CHEM. 192:161-174.

(127) ------ (WITH A NOTE BY F. R. SENTI AND N. N. HELLMAN). 1956. NATURAL SYNTHESIS OF LOW MOLECULAR WEIGHT (CLINICAL TYPE) DEXTRAN BY A STREPTOCOCCUS STRAIN. J. BIOL. CHEM. 222:739-750.

(128) HOLLO, J., AND E. LASZLO. 1971. SYNTHESIS OF DEXTRAN. I. IMPORTANCE OF SUCROSE CONCENTRATION IN THE COURSE OF DEXTRAN FERMENTATION. PERIOD. POLYTECH. CHEM. ENG. 15(1-2):35-42. ALSO IN CHEM. ABSTR. 1971. 75:47489E.

(129) JANUSZEWICZ, I., AND P. WOJCIESZAK. 1954. [BIOSYNTHESIS OF DEXTRAN BY STRAIN L OF LEUCONOSTOC MESENTEROIDES] (IN POLISH). PR. GL. INST. PRZEM. ROLNEGO SPOZYW. 4(3):1-14. ALSO IN CHEM. ABSTR. 1955. 49:14092I.

(130) JEANES, A., C. A. WILHAM, AND J. C. MIERS. 1948. PREPARATION AND CHARACTERIZATION OF DEXTRAN FROM LEUCONOSTOC MESENTEROIDES. J. BIOL. CHEM. 176:603-615.

(131) ------. 1965. PREPARATION OF DEXTRANS FROM GROWING LEUCONOSTOC CULTURES. METHODS CARBOHYDR. CHEM. 5:118-127.

(132) MANSKI, W., Z. SKURSKA, AND J. NAWROCKI. 1953. [DEXTRAN. I. SYNTHESIS OF DEXTRAN BY LEUCONOSTOC MESENTEROIDES] (IN POLISH, ENGLISH SUMMARY). ARCH. IMMUNOL. TER. DOSW. 1:321-334. ALSO IN CHEM. ABSTR. 1956. 50:7216C.

(133) MISAKI, A., S. YUKAWA, T. ASANO, AND M. ISONO. 1966. DEXTRAN PRODUCED BY LEUCONOSTOC SP. 117. (IN JAPANESE, ENGLISH SUBTITLE AND ABSTRACT.) ANNU. REP. TAKEDA RES. LAB. 25:42-54. ALSO IN CHEM. ABSTR. 1967. 66:54255T.

(134) NADEL, H., C. I. RANDLES, AND G. L. STAHLY. 1953. THE INFLUENCE OF ENVIRONMENTAL FACTORS ON THE MOLECULAR SIZE OF DEXTRAN. APPL. MICROBIOL. 1:217-224.

(135) SCULLY, N. J., H. E. STAVELY, J. SKOK, AND OTHERS. 1952. BIOSYNTHESIS OF THE C14-LABELED FORM OF DEXTRAN. SCIENCE 116:87-89.

(136) SHINODA, A. 1958. DEXTRAN FERMENTATION. J. GEN. APPL. MICROBIOL. 4:85-101. ALSO IN CHEM. ABSTR. 1959. 53:22719B.

(137) SKOK, J. 1953. UTILIZATION OF CARBON-14 IN PLANT-RESEARCH STUDIES. CONF. USE OF ISOTOPES IN PLANT AND ANIMAL RESEARCH, U.S. ATOMIC ENERGY COMM., TID-5098; AGRIC. EXP. ST. KANSAS STATE COLL., REP. NO. 4, 200-207. ALSO IN CHEM. ABSTR. 1954. 48:4638D.

(138) TARR, H. L. A., AND H. HIBBERT. 1931. STUDIES ON REACTIONS RELATING TO CARBOHYDRATES AND POLYSACCHARIDES. XXXVII. THE FORMATION OF DEXTRAN BY LEUCONOSTOC MESENTEROIDES. (INCLUDES SIGNIFICANT REVIEW OF EARLY RESEARCH ON DEXTRAN-PRODUCING STRAINS.) CAN. J. RES. 5:414-427.

SEE ALSO: 47 49 164 197 396 410
773 774

III. Enzymatic synthesis

Cariogens are excluded here but included in section XXIII.

Dextransucrase (sucrose:1,6-α-D-glucan 6-α-glucosyltransferase, E.C. 2.4.1.5).

Dextrin-dextranase[2] (1,4-α-D-glucan:1,6-α-D-glucan 6-α-glucosyltransferase, E.C. 2.4.1.2).

Recommendations (1972) of the International Union of Pure and Applied Chemistry and the International Union of Biochemistry; Commission on Biochemical Nomenclature on the Nomenclature and Classification of Enzymes. Elsevier Scientific Publishing Co., Amsterdam, The Netherlands; American Elsevier Publishing Co., Inc., New York, N.Y.

A. Preparation of Dextransucrases, Dextran-Dextrinase, and Dextrans

Factors and substances that influence the synthesis and the dextran product; assay of the enzymes.

(139) BAILEY, R. W. 1959. TRANSGLUCOSIDASE ACTIVITY OF RUMEN STRAINS OF STREPTOCOCCUS BOVIS. 2. ISOLATION AND PROPERTIES OF DEXTRANSUCRASE. BIOCHEM. J. 72:42-49.

(140) CARLSON, W. W., C. L. ROSANO, AND V. WHITESIDE-CARLSON. 1953. STUDIES ON THE DEXTRANSUCRASE OF LEUCONOSTOC DEXTRANICUM. J. BACTERIOL. 65:136-140.

(141) CYBULSKA, J., AND R. PAKULA. 1963. [STREPTOCOCCAL POLYGLUCOSIDASES. I. A MEDIUM SUITABLE FOR POLYGLUCOSIDASE-PRODUCTION] (IN POLISH). MED. DOSW. MIKROBIOL. 15(3):177-188. ALSO IN CHEM. ABSTR. 1964. 60:8366E.

(142) ------ AND R. PAKULA. 1963. [STREPTOCOCCAL POLYGLUCOSIDASES. II. EFFECT OF SOME FACTORS ON ENZYMIC SYNTHESIS OF DEXTRAN IN CELL-FREE MEDIA] (IN POLISH). MED. DOSW. MIKROBIOL. 15(4):273-284. ALSO IN EXP. MED. MICRIOBIOL. 15(4):285-296 AND CHEM. ABSTR. 1964. 60:10982H.

(143) ------ AND R. PAKULA. 1963. [STREPTOCOCCAL POLYGLUCOSIDASES. III. CONCENTRATION AND PURIFICATION OF THE ENZYME] (IN POLISH). MED. DOSW. MIKROBIOL. 15(4):285-292. ALSO IN EXP. MED. MICROBIOL. 15(4): 285-292 AND CHEM. ABSTR. 1964. 60:10982H.

(144) BEHRENS, U., AND L. WUENSCHE. 1969. [UTILIZATION OF FINAL MOLASSES IN DEXTRAN PRODUCTION (IN SPANISH). SOBRE DERIV. CANA. AZUCAR 3(3):39-46. ALSO IN CHEM. ABSTR. 1970. 73:57413Y.

(145) DUNICAN, L. K., AND H. W. SEELEY, JR. 1963. TEMPERATURE-SENSITIVE DEXTRANSUCRASE SYNTHESIS BY A LACTOBACILLUS. J. BACTERIOL. 86:1079-1083.

---

[2] Dr. Edward J. Hehre designated this enzyme Dextran-Dextrinase because it "brings about synthesis of the predominantly 1,6-linked glucose polymer, dextran, by catalysing the repetitive transfer of α-D-glucopyranosyl radicals from . . . dextrin molecules to . . . acceptor molecules." (Reference 155.)

(146) DWORSCHACK, R. G., A. A. LAGODA, AND R. W. JACKSON. 1954. FERMENTOR FOR SMALL-SCALE SUBMERGED FERMENTATIONS. APPL. MICROBIOL. 2:190-197.

(147) HEHRE, E. J. 1941. PRODUCTION FROM SUCROSE OF A SEROLOGICALLY REACTIVE POLYSACCHARIDE BY A STERILE BACTERIAL EXTRACT. SCIENCE 93:237-238.

(148) ------ AND J. Y. SUGG. 1942. SEROLOGICALLY REACTIVE POLYSACCHARIDES PRODUCED THROUGH THE ACTION OF BACTERIAL ENZYMES. I. DEXTRAN OF LEUCONOSTOC MESENTEROIDES FROM SUCROSE. J. EXP. MED. 75:339-353.

(149) ------. 1946. STUDIES ON THE ENZYMATIC SYNTHESIS OF DEXTRAN FROM SUCROSE. J. BIOL. CHEM. 163:221-233.

(150) ------ (WITH THE ASSISTANCE OF D. M. HAMILTON, AND A. S. CARLSON). 1949. SYNTHESIS OF A POLYSACCHARIDE OF THE STARCH-GLYCOGEN CLASS FROM SUCROSE BY A CELL-FREE, BACTERIAL ENZYME SYSTEM (AMYLOSUCRASE). [COMPARISONS WITH DEXTRANS.] J. BIOL. CHEM. 177:267-279.

(151) ------. 1952. AN UNUSUAL STREPTOCOCCUS THAT YIELDS LOW MOLECULAR WEIGHT (CLINICAL TYPE) DEXTRAN DIRECTLY [ABSTRACT A22]. BACTERIOL. PROC. 23.

(152) ------. 1953. LOW MOLECULAR WEIGHT DEXTRAN AS A MODIFIER OF DEXTRAN SYNTHESIS. J. AM. CHEM. SOC. 75:4866.

(153) ------. 1955. POLYSACCHARIDE SYNTHESIS FROM DISACCHARIDES. I. DEXTRANSUCRASE: PREPARATION, PROPERTIES. METHODS ENZYMOL. 1:178-192.

(154) ------. 1961. DEXTRANSUCRASE. IN C. LONG, ED., BIOCHEMIST'S HANDBOOK, PP. 513-514. D. VAN NOSTRAND CO. INC., NEW YORK.

(155) ------. 1961. DEXTRAN-DEXTRINASE. IN C. LONG, ED., BIOCHEMIST'S HANDBOOK, PP. 515. D. VAN NOSTRAND CO. INC., NEW YORK.

(156) HELLMAN, N. N., H. M. TSUCHIYA, S. P. ROGOVIN, AND OTHERS. 1955. CONTROLLED ENZYMATIC SYNTHESIS OF DEXTRAN. CONDITIONS FOR PRODUCING CLINICALLY SUITABLE MOLECULAR WEIGHT. IND. ENG. CHEM. 47:1593-1598.

(157) HESTRIN, S., S. AVINERI-SHAPIRO, AND M. ASCHNER. 1943. THE ENZYMIC PRODUCTION OF LEVAN. (ORIGIN OF NAME DEXTRANSUCRASE.) BIOCHEM. J. 37:450-456.

(158) JEANES, A. 1965. PREPARATION OF A WATER-SOLUBLE DEXTRAN BY ENZYMIC SYNTHESIS. METHODS CARBOHYDR. CHEM. 5:127-132.

(159) KOEPSELL, H. J., AND H. M. TSUCHIYA. 1952. ENZYMATIC SYNTHESIS OF DEXTRAN. J. BACTERIOL. 63:293-295.

(160) ------, H. M. TSUCHIYA, N. N. HELLMAN, AND OTHERS. 1953. ENZYMATIC SYNTHESIS OF DEXTRAN. ACCEPTOR SPECIFICITY AND CHAIN INITIATION. J. BIOL. CHEM. 200:793-801.

(161) LAKATA, G. D. 1954. APPARATUS FOR CONTROLLED SUBMERGED FERMENTATION. APPL. MICROBIOL. 2:2-4.

(162) OGINA, S. 1970. FORMATION OF THE FRUCTOSE-RICH POLYMER BY WATER-INSOLUBLE DEXTRANSUCRASE AND PRESENCE OF A GLYCOGEN VALUE-LOWERING FACTOR. (LOWERS REACTIVITY WITH CONCANAVALIN A.) AGRIC. BIOL. CHEM. 34:1268-1271.

(163) PATAT, F. 1957. [ON ENZYMIC POLYMERIZATION I. THE SYNTHESIS OF DEXTRAN] (IN GERMAN). 1957. MONATSCH. CHEM. 88:560-568.

(164) RINGPFEIL, M., AND M. SELENINA. 1962. PRELIMINARY STUDIES FOR CONTINUOUS PRODUCTION OF DEXTRAN. IN I. MALEK, K. BERAN, AND J. HOSPODKA, EDS., CONTINUOUS CULTIVATION OF MICROORGANISMS, PP. 145-151. ACADEMIC PRESS, NEW YORK.

(165) SHARMA, M. L., AND E. NEWBRUN. 1973. CONTINUOUS SPECTROPHOTOMETRIC ASSAY OF GLUCOSYLTRANSFERASE AND BETA-FRUCTOFURANOSIDASE ACTIVITY. CARBOHYDR. RES. 29:165-172.

(166) SHIGA, T., AND M. SHIMO. 1957. [STUDIES ON ENZYMATIC SYNTHESIS OF DEXTRAN. PART I. ON THE CONDITIONS OF DEXTRANSUCRASE PRODUCTION] (IN JAPANESE). J. AGRIC. CHEM. SOC. JAPAN. 31:272-275. ALSO IN CHEM. ABSTR. 1958. 12993F.

(167) ------ AND M. SHIMO. 1957. [STUDIES ON ENZYMATIC SYNTHESIS OF DEXTRAN. PART II. ON THE CONDITIONS OF ENZYMATIC SYNTHESIS AND DEXTRANSUCRASE PRODUCTION] (IN JAPANESE). J. AGRIC. CHEM. SOC. JAPAN 31:276-279. ALSO IN CHEM. ABSTR. 1958. 12993G.

(168) SMITH, E. E. 1970. BIOSYNTHETIC RELATION BETWEEN THE SOLUBLE AND INSOLUBLE DEXTRANS PRODUCED BY LEUCONOSTOC MESENTEROIDES NRRL B-1299. FEBS LETT. 12:33-37.

(169) SOHNS, V. E., S. P. ROGOVIN, H. F. CONWAY, AND C. T. LANGFORD. 1954. PILOT-PLANT PRODUCTION OF CLINICAL-SIZED DEXTRAN BY ACID HYDROLYSIS OF THE ENZYMATICALLY SYNTHESIZED HIGH POLYMER. NORTHERN REGIONAL RESEARCH LABORATORY, PEORIA, ILLINOIS, AIC-372. 30 PP.

(170) STACEY, M. 1942. ENZYMATIC PRODUCTION OF BACTERIAL POLYSACCHARIDES. NATURE (LONDON) 149:639.

(171) ------. 1943. ENZYMATIC SYNTHESIS OF POLYSACCHARIDES. CHEM. IND. (LONDON) (62):111.

(172) TSUCHIYA, H. M., H. J. KOEPSELL, J. CORMAN, AND OTHERS. 1952. THE EFFECT OF CERTAIN CULTURAL FACTORS ON PRODUCTION OF DEXTRANSUCRASE BY LEUCONOSTOC MESENTEROIDES. J. BACTERIOL. 64:521-526.

(173) ------, N. N. HELLMAN, AND H. J. KOEPSELL. 1953. FACTORS AFFECTING MOLECULAR WEIGHT OF ENZYMATICALLY SYNTHESIZED DEXTRAN. J. AM. CHEM. SOC. 75:757-758.

(174) ------, N. N. HELLMAN, H. J. KOEPSELL, AND OTHERS. 1955. FACTORS AFFECTING MOLECULAR WEIGHT OF ENZYMATICALLY SYNTHESIZED DEXTRAN. J. AM. CHEM. SOC. 77:2412-2419.

(175) WUENSCHE, L., U. BEHRENS, AND E. LEIBNITZ. 1967. [EFFECT OF SALT CONCENTRATION ON ENZYMIC DEXTRAN SYNTHESIS] (IN GERMAN). MONATSBER. DTSCH. AKAD. WISS. BERLIN 9(12):929-933. ALSO IN CHEM. ABSTR. 1969. 70:84395P.

SEE ALSO: 123 126 262 267 268
2271 THROUGH 2296 PATENT SECTION XXVIII

B. Dextransucrase

Occurrence; donor(s), acceptors, and specificity; constitution, properties; and activity—conditions for and measure of.

(176) BAILEY, R. W., S. A. BARKER, E. J. BOURNE, AND M. STACEY. 1957. IMMUNOPOLYSACCHARIDES. PART VI. THE ISOLATION AND PROPERTIES OF THE DEXTRANSUCRASE OF BETACOCCUS ARABINOSACEOUS. J. CHEM. SOC. 3530-3536.

(177) ------, S. A. BARKER, E. J. BOURNE, AND OTHERS. 1957. SIGNIFICANCE OF OLIGOSACCHARIDE INTERMEDIATES IN DEXTRAN SYNTHESIS. NATURE (LONDON) 179:310.

(178) ------ AND E. J. BOURNE. 1961. INTRACELLULAR GLYCOSIDASES OF DEXTRAN-PRODUCING BACTERIA. NATURE (LONDON) 191:277-278.

(179) BARKER, S. A., E. J. BOURNE, M. STACEY, AND R. B. WARD. 1955. EFFECT OF STREPTOMYCIN ON VARIOUS ENZYMES RESPONSIBLE FOR SYNTHESES AND DEGRADATIONS OF HIGHER SACCHARIDES. NATURE (LONDON) 175:203-204.

(180) EBERT, K. H., AND G. SCHENK. 1962. [ENZYMATIC POLYMERIZATION III. PREPARATION, PURIFICATION AND CHARACTERIZATION OF DEXTRANSUCRASE FROM LEUCONOSTOC MESENTEROIDES B-512(F)] (IN GERMAN, ENGLISH SUMMARY). Z. NATURFORSCH. 17B:732-738.

(181) ------, G. RUPPRECHT, AND G. SCHENK. 1963. [ENZYMATIC POLYMERIZATION V. THE SPECIFICITY OF DEXTRANSUCRASE FROM LEUCONOSTOC MESENTEROIDES B-512(F)] (IN GERMAN, ENGLISH SUMMARY). Z. NATURFORSCH. 18B:442-446.

(182) FEINGOLD, D. S., G. AVIGAD, AND S. HESTRIN. 1957. ENZYMATIC SYNTHESIS AND REACTIONS OF A SUCROSE ISOMER ALPHA-D-GALACTOPYRANOSYL-BETA-D-FRUCTOFURANOSIDE. (TESTED AS SUBSTRATE FOR DEXTRANSUCRASE.) J. BIOL. BUNSENGES. PHYS. CHEM. 68:765-767. ALSO IN CHEM. CHEM. 224:295-307.

(183) GENGHOF, D. S., AND E. J. HEHRE. 1972. DE NOVO GLYCOSIDIC LINKAGE SYNTHESIS BY GLYCOSYLASES: ALPHA-D-GLUCOSYL FLUORIDE POLYMERIZATION BY DEXTRANSUCRASE. PROC. SOC. EXP. BIOL. MED. 140:1298-1301.

(184) HEHRE, E. J., AND H. SUZUKI. 1966. NEW REACTIONS OF DEXTRANSUCRASE: ALPHA-D-GLUCOSYL TRANSFERS TO AND FROM THE ANOMERIC SITES OF LACTULOSE AND FRUCTOSE. ARCH. BIOCHEM. BIOPHYS. 113:675-683.

(185) ITAYA, K., AND T. YAMAMOTO. 1975. DEXTRANSUCRASE AS AN ENZYME ASSOCIATING WITH ALKALINE EARTH METAL IONS. AGRIC. BIOL. CHEM. 39:1187-1192.

(186) KOBAYASHI, M., AND K. MATSUDA. 1974. THE DEXTRANSUCRASE ISOENZYMES OF LEUCONOSTOC MESENTEROIDES NRRL B-1299. BIOCHIM. BIOPHYS. ACTA 370:441-449.

(187) ------ AND K. MATSUDA. 1975. PURIFICATION AND CHARACTERIZATION OF TWO ACTIVITIES OF THE INTRACELLULAR DEXTRANSUCRASE FROM LEUCONOSTOC MESENTEROIDES NRRL B-1299. BIOCHIM. BIOPHYS. ACTA 397:69-79.

(188) ------ AND K. MATSUDA. 1975. CONVERSION OF THE EXTRACELLULAR DEXTRANSUCRASE ISOENZYMES FROM LEUCONOSTOC MESENTEROIDES NRRL B-1299. AGRIC. BIOL. CHEM. 39:2087-2088.

(189) NEELY, W. B. 1958. INHIBITION OF DEXTRANSUCRASE BY EXCESS SUBSTRATE. NATURE (LONDON) 182:1007-1008.

(190) ------. 1958. STUDIES ON THE ENZYME DEXTRANSUCRASE. I. THE EFFECT OF PH ON ENZYME ACTIVITY. J. AM. CHEM. SOC. 80:2010-2013.

(191) ------. 1959. STUDIES ON THE ENZYME DEXTRANSUCRASE. II. THE ROLE OF RAFFINOSE AS AN ACCEPTOR. ARCH. BIOCHEM. BIOPHYS. 79:154-161.

(192) ------. 1959. STUDIES ON THE ENZYME DEXTRANSUCRASE. III. FURTHER EVIDENCE FOR THE PRESENCE OF IMIDAZOLE AT THE CATALYTIC SITE OF THE ENZYME. ARCH. BIOCHEM. BIOPHYS. 79:297-301.

(193) ------. 1959. STUDIES ON THE ENZYME DEXTRANSUCRASE. IV. ALTERING THE SUBSTRATE SPECIFICITY PATTERN OF THE ENZYME. J. AM. CHEM. SOC. 81:4416-4418.

(194) ------ AND J. HALLMARK. 1961. DEXTRANSUCRASE V AND THE ROLE OF METAL IONS IN ENZYME CATALYSIS. NATURE (LONDON) 191:385-386.

(195) ------ AND J. NOTT. 1962. DEXTRANSUCRASE, AN INDUCED ENZYME FROM LEUCONOSTOC MESENTEROIDES. BIOCHEMISTRY 1:1136-1140.

(196) NIOBE, M., AND T. KOBAYASHI. 1972. [STUDIES ON DEXTRANSUCRASE. PART I. PURIFICATION AND PROPERTIES OF THE ENZYME PRODUCED BY LEUCONOSTOC MESENTEROIDES IAM 1046, AND THE STRUCTURE OF ENZYMATICALLY SYNTHESIZED DEXTRANS] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 46:81-88. ALSO IN MICROBIOL. ABSTR. 1973. SEC. A, 8(1):8A19.

(197) SPENDLOVE, J. C., AND G. L. STAHLY. 1952. PRODUCTION OF DEXTRAN BY LEUCONOSTOC MESENTEROIDES IN MEDIA NUTRITIONALLY DEFICIENT FOR BACTERIAL MULTIPLICATION [ABSTRACT A23]. BACTERIOL. PROC. 24.

(198) TSUCHIYA, H. M. 1960. DEXTRANSUCRASE. BULL. SOC. CHIM. BIOL. 42:1777-1788.

SEE ALSO: 160 168 238 261 276
271 THROUGH 2296 2329 2348 2355

C. Theory, Mechanism, and Kinetics of Dextran Synthesis

Comparison of dextransucrase with related glycosylases.

(199) BARKER, S. A., AND E. J. BOURNE. 1953. ENZYMIC SYNTHESIS OF POLYSACCHARIDES. SYNTHESIS OF ALPHA-GLUCOSANS OF THE DEXTRAN CLASS. Q. REV. CHEM. SOC. 7:70-73.

(200) BOVEY, F. A. 1959. ENZYMATIC POLYMERIZATION. I. MOLECULAR WEIGHT AND BRANCHING DURING THE FORMATION OF DEXTRAN. J. POLYM. SCI. 35:167-182.

(201) ------. 1959. ENZYMATIC POLYMERIZATION. II. BRANCHING BY REARRANGEMENT AND ITS APPLICATION TO THE DEXTRAN SYSTEM. J. POLYM. SCI. 35:183-190.

(202) ------. 1959. ENZYMATIC POLYMERIZATION. III. THE INFLUENCE OF A GLUCOSYL ACCEPTOR, METHYL ALPHA-D-GLUCOSIDE, ON THE MOLECULAR WEIGHT AND KINETICS OF FORMATION OF DEXTRAN. J. POLYM. SCI. 35:191-204.

(203) BRASWELL, E., AND K. G. STERN. 1959. STUDIES ON THE ENZYMATIC SYNTHESIS OF DEXTRAN. J. POLYM. SCI. 41:467-473.

(204) ------, A. GOODMAN, AND K. G. STERN. 1962. STUDIES ON THE ENZYMATIC SYNTHESIS OF DEXTRAN. PART II. J. POLYM. SCI. 61:143-154.

(205) CARTER, J., M. M. MCCABE, AND E. E. SMITH. 1975. THE ROLE OF THE 1,6 ALPHA-GLUCOSIDIC BOND IN THE SYNTHESIS OF ALPHA-GLUCANS. IN COLLOQUIUM:THE BIOCHEMISTRY OF 1,6-ALPHA-GLUCOSIDIC LINKAGES. BIOCHEM. SOC. TRANS. 3(1):57-59.

(206) DEDONDER, R. A. 1961. GLYCOSIDASES AND TRANSGLYCOSIDATION. ANNU. REV. BIOCHEM. 30:347-382.

(207) EBERT, K. H., AND F. PATAT. 1962. [ENZYMATIC POLYMERIZATION IV. KINETIC CONSIDERATIONS REGARDING THE ENZYMATIC SYNTHESIS OF DEXTRAN] (IN GERMAN). Z. NATURFORSCH. 17B:738-746.

(208) ------, G. SCHENK, AND H. STRICKER. 1964. [THE MECHANISM OF THE SYNTHETIC STEPS OCCURRING IN THE PRODUCTION OF DEXTRAN AND LEVAN] (IN GERMAN). BER. BUNSENGES. PHYS. CHEM. 68:765-767. ALSO IN CHEM. ABSTR. 1965. 62:8072E.

(209) ------. 1966. [ON THE BIOLOGICAL SYNTHESIS OF HIGH POLYMERIC SUBSTANCES] (IN GERMAN). NATURWISSENSCHAFTEN 53(2):32-36.

(210) ----- AND M. BROSCHE. 1967. ORIGIN OF BRANCHES IN NATIVE DEXTRANS. BIOPOLYMERS 5:423-430.

(211) ------ AND D. HEINICKE. 1967. EFFECT OF GAMMA-RAYS ON THE ACTION OF AN ENZYME. NATURE (LONDON) 215(5108):1383-1384.

(212) ------ AND G. SCHENK. 1968. [ENZYMATIC POLYMERIZATION IX. KINETICS AND MECHANISM OF ENZYMATIC DEXTRAN SYNTHESIS AND THE EFFECT OF ACCEPTORS ON THE REACTION] (IN GERMAN). Z. NATURFORSCH. 23B:788-797.

(213) EISENBERG, F., JR., AND S. HESTRIN. 1963. GLYCOSYL TRANSFER BY LEVANSUCRASE AND DEXTRANSUCRASE. BULL. RES. COUNC. ISRAEL 11A(4):269-274.

(214) GOODMAN, A., R. M. WEIL, AND K. G. STERN. 1955. ON THE MECHANISM OF DEXTRAN FORMATION. CHROMATOGRAPHIC STUDIES WITH C-14 LABELLED SUGARS. J. BIOL. CHEM. 217:977-985.

(215) HEHRE, E. J. 1943. COMPARISON OF DEXTRAN SYNTHESIS BY LEUCONOSTOC ENZYME WITH STARCH SYNTHESIS BY POTATO PHOSPHORYLASE. PROC. SOC. EXP. BIOL. MED. 54:240-242.

(216) ------. 1951. THE SYNTHESIS OF POLYSACCHARIDES WITHOUT THE INTERMEDIATION OF PHOSPHATE. IN W. D. MCELROY AND B. GLASS, EDS. PHOSPHORUS METABOLISM, VOL. 1, PP. 48-52. JOHNS HOPKINS PRESS, BALTIMORE, MARYLAND.

(217) ------. 1960. TRANSOSYLATION CONCEIVED AS GLYCOSYL-HYDROGEN INTERCHANGE. BULL. SOC. CHIM. BIOL. 42:1713-1714.

(218) ------. 1960. THE ORIGINS OF SPECIFICITY: A FORMULATION OF THE PROBLEM FOR DEXTRANS AT THE ENZYMIC LEVEL. BULL. SOC. CHIM. BIOL. 42:1805-1808.

(219) ------. 1966. THE DIRECTION OF PROPOGATION IN CARBOHYDRASE-CATALYZED POLYMERIZATIONS. PROC. IUPAC INT. SYMP. MACROMOL. CHEM. (TOKYO-KYOTO, 1966), 1:178-181.

(220) ------. 1968. THE DIRECTION OF PROPAGATION IN CARBOHYDRASE-CATALYZED POLYMERIZATIONS. J. POLYM. SCI. PART C, 23:239-244.

(221) ------, G. OKADA, AND D. S. GENGHOF. 1969. CONFIGURATIONAL SPECIFICITY: UNAPPRECIATED KEY TO UNDERSTANDING ENZYMIC REVERSIONS AND DE NOVO GLYCOSIDIC BOND SYNTHESIS. I. REVERSAL OF HYDROLYSIS BY ALPHA-, BETA- AND GLYCOAMYLASES WITH DONORS OF CORRECT ANOMERIC FORM. ARCH. BIOCHEM. BIOPHYS. 135:75-89.

(222) ------, D. S. GENGHOF, AND G. OKADA. 1971. THE ALPHA-AMYLASES AS GLYCOSYLASES, WITH WIDER CATALYTIC CAPACITIES THAN ENVISIONED OR EXPLAINED BY THEIR REPRESENTATION AS HYDROLASES. ARCH. BIOCHEM. BIOPHYS. 142:382-393.

(223) ------, G. OKADA, AND D. S. GENGHOF. 1973. GLYCOSYLATION AS THE PARADIGM OF CARBOHYDRASE ACTION: EVIDENCE FROM THE ACTIONS OF AMYLASES. ADV. CHEM. SER. THE ACTIONS OF AMYLASES. ADV. CHEM. SER. NO. 117:306-333.

(224) HESTRIN, S., AND S. AVINERI-SHAPIRO. 1943. MECHANISM OF POLYSACCHARIDE PRODUCTION FROM SUCROSE. NATURE (LONDON) 152:49-50.

(225) ------. 1962. SYNTHESIS OF POLYMERIC HOMOSACCHARIDES IN I. C. GUNSALUS AND R. Y. STANIER, EDS. THE BACTERIA: A TREATISE ON STRUCTURE AND FUNCTION, VOL. 3, BIOSYNTHESIS, PP. 373-378. ACADEMIC PRESS, INC., NEW YORK AND LONDON.

(226) ------ AND S. AVINERI-SHAPIRO. 1944. THE MECHANISM OF POLYSACCHARIDE PRODUCTION FROM SUCROSE. BIOCHEM. J. 38:2-10.

(227) NEELY, W. B., AND C. F. THOMPSON. 1959. KINETIC STUDY OF DEXTRANSUCRASE BASED ON THE LANGMUIR ADSORPTION ISOTHERM. NATURE (LONDON) 184:64.

(228) PATAT, F. 1957. [ON ENZYMATIC POLYMERIZATION. I. THE FORMATION OF DEXTRAN] (IN GERMAN). MONATSH. CHEM. 88:560-568.

(229 ------ AND H. MEYER. 1958. [ON ENZYMATIC POLYMERIZATION II. KINETICS OF ENZYMATIC DEXTRAN SYNTHESIS] (IN GERMAN, ENGLISH SUMMARY). BIOCHEM. Z. 330:209-217.

(230) ------. 1962. [ON ENZYMATIC POLYMERIZATION OF SUCROSE] (IN GERMAN). KOLLOID Z. Z. POLYM. 182:115-121.

(231) ROBYT, J. F., B. K. KIMBLE, T. F. WALSETH. 1974. THE MECHANISM OF DEXTRANSUCRASE ACTION: DIRECTION OF DEXTRAN BIOSYNTHESIS. ARCH. BIOCHEM. BIOPHYS. 165:634-640.

(232) ------ AMD G. SAMHFTCGH. 1976. SGE LECGAMHRM OF DEXTRANSUCRASE ACTION: BIOSYNTHESIS OF BRANCH LINKAGES BY ACCEPTOR REACTIONS WITH DEXTRAN. ARCH. BIOCHEM. BIOPHYS. 174:129-135.

(233) STRINGER, C. S., AND H. M. TSUCHIYA. 1958. A KINETIC STUDY OF DEXTRANSUCRASE. J. AM. CHEM. SOC. 80:6620-6625.

(234) WEIBULL, B. 1958. DISTRIBUTION OF COMPOUNDS IN POLYSACCHARIDE SYNTHESIS USING DEXTRANSUCRASE. ACTA CHEM. SCAND. 12:568-573.

(235) WHELAN, W. J. 1956-1957. THE SYNTHESIS AND DEGRADATION OF POLYSACCHARIDES. LECT. SCI. BASIS MED. 6:233-259.

SEE ALSO: 149 150 165 168 272 2502

D. Oligosaccharide and Glycoside Formation by Transglucosylation Activity of Dextransucrases and Growing Leuconostoc Cultures

(236) ASO, K., AND F. YAMAUCHI. 1961. SYNTHESIS OF OLIGOSACCHARIDES BY GROWING CULTURE OF LEUCONOSTOC MESENTEROIDES. PART III. ISOLATION AND IDENTIFICATION OF LACTSUCROSE. AGRIC. BIOL. CHEM. 25(1):10-14. ALSO IN CHEM. ABSTR. 1961. 55:11541B.

(237) BAILEY, R. W., S. A. BARKER, E. J. BOURNE, AND M. STACEY. 1955. ENZYMATIC SYNTHESIS OF A BRANCHED TRISACCHARIDE. NATURE (LONDON) 176:1164-1165.

(238) ------, S. A. BARKER, E. J. BOURNE, AND M. STACEY. 1957. IMMUNOPOLYSACCHARIDES. PART VII. THE TRANSGLUCOSYLASE ACTION OF BETACOCCUS ARABINOSACEOUS DEXTRANSUCRASE. J. CHEM. SOC. 3536-3541.

(239) ------, S. A. BARKER, E. J. BOURNE, AND OTHERS. 1958. IMMUNOPOLYSACCHARIDES. PART VIII. ENZYMIC SYNTHESIS OF 6-0-ALPHA-D-GLUCOPYRANOSYL-3-0-METHYL-D-GLUCOSE BY BETACOCCUS ARABINOSACEOUS. J. CHEM. SOC. 601-604.

(240) ------, S. A. BARKER, E. J. BOURNE, AND OTHERS. 1958. IMMUNOPOLYSACCHARIDES. PART IX. THE ENZYMATIC SYNTHESIS OF TRISACCHARIDES CONTAINING THE ALPHA-1:2-GLUCOSIDIC LINKAGE. J. CHEM. SOC. 1895-1902.

(241) ------ AND E. J. BOURNE. 1959. FORMATION OF LEUCROSE IN DEXTRAN-PRODUCING CULTURES OF STREPTOCOCCUS BOVIS. NATURE (LONDON) 184:904-905.

(242) BARKER, S. A., E. J. BOURNE, P. M. GRANT, AND M. STACEY. 1956. ENZYMIC AND CHEMICAL SYNTHESIS OF THE ALPHA-1:2-GLUCOSIDIC LINKAGE. ENZYMIC SYNTHESIS. NATURE (LONDON) 178:1221-1222.

(243) BOURNE, E. J., J. HARTIGAN, AND H. WEIGEL. 1959. MECHANISM OF THE ENZYMIC SYNTHESIS OF A BRANCHED TRISACCHARIDE CONTAINING THE ALPHA-1:2-GLUCOSIDIC LINKAGE. J. CHEM. SOC. 2332-2337.

(244) ------, D. H. HUTSON, AND H. WEIGEL. 1961. OLIGOSACCHARIDES IN DEXTRAN-PRODUCING CULTURES OF STREPTOCOCCUS BOVIS. BIOCHEM. J. 79:549-553.

(245) ------, J. HARTIGAN, AND H. WEIGEL. 1961. BIOSYNTHESIS OF ALPHA-D-GLUCOPYRANOSYL D-GALACTOFURANOSIDE AND OTHER D-GALACTOSE-CONTAINING SACCHARIDES BY BETACOCCUS ARABINOSACEOUS. J. CHEM. SOC. 1088-1092.

(246) ------, J. PETERS, AND H. WEIGEL. 1964. SYNTHESIS OF SUCROSE LABELLED WITH CARBON-14 IN THE FRUCTOSE PART. J. CHEM. SOC. 4605-4607.

(247) GENGHOF, D. S., AND E. J. HEHRE. 1972. DE NOVO GLYCOSIDIC LINKAGE SYNTHESIS BY GLYCOSYLASES: ALPHA-D-GLUCOSYL FLUORIDE POLYMERIZATION BY DEXTRANSUCRASE. PROC. SOC. EXP. BIOL. MED. 140:1298-1301.

(248) IRIKI, Y., AND E. J. HEHRE. 1969. THE SCOPE OF THE INTERANOMERIC GLYCOSYL TRANSFER REACTIONS: HETERO-DIALDOSIDE SYNTHESIS BY ENZYMIC GLUCOSYLATION OF D-GALACTOSE AND D-MANNOSE. ARCH. BIOCHEM. BIOPHYS. 134:130-138.

(249) JONES, R. W., A. JEANES, C. S. STRINGER, AND H. M. TSUCHIYA. 1956. CRYSTALLINE METHYL ALPHA-ISOMALTOSIDE AND ITS HOMOLOGUES OBTAINED BY SYNTHETIC ACTION OF DEXTRANSUCRASE. J. AM. CHEM. SOC. 78:2499-2502.

(250) KILLEY, M., R. J. DIMLER, AND J. E. CLUSKEY. 1955. PREPARATION OF PANOSE BY THE ACTION OF NRRL B-512 DEXTRANSUCRASE ON A SUCROSE-MALTOSE MIXTURE. J. AM. CHEM. SOC. 77:3315-3318.

(251) MAUCH, W., AND S. SCHMIDT-BERG-LORENZ. 1964. [THE BACTERIAL-ENZYMIC REARRANGEMENT PROCESS: SUCROSE-ISOMALTOSE] (IN GERMAN). Z. ZUCKERIND. 14(6): 309-315. ALSO IN CHEM. ABSTR. 1964. 61:5964H.

(252) ------ AND S. SCHMIDT-BERG-LORENZ. 1964. [THE MECHANISM OF THE BACTERIAL-ENZYMATIC REARRANGEMENT SUCROSE-ISOMALTULOSE (6-[ALPHA-D-GLUCOSYL]-D-FRUCTOSE)] (IN GERMAN). Z. ZUCKERIND. 14(7):375-383. ALSO IN CHEM. ABSTR. 1964. 61:14877H.

(253) SHARPE, E. S., F. H. STODOLA, AND H. J. KOEPSELL. 1960. FORMATION OF ISOMALTULOSE IN ENZYMATIC DEXTRAN SYNTHESIS. J. ORG. CHEM. 25:1062-1063.

(254) SHIBASAKI, K. 1958. [SYNTHESIS OF OLIGOSACCHARIDES BY GROWING CULTURE OF LEUCONOSTOC MESENTEROIDES. PART I. OLIGOSACCHARIDES FORMED FROM REACTION OF SUCROSE AND GLUCOSE-POLYMERS] (IN JAPANESE, ENGLISH ABSTRACT). NIPPON NOGEI KAGAKU KAISHI 32:133-138. ALSO IN CHEM. ABSTR. 1959. 53:498C.

(255) ------ AND K. ASO. 1959. [SYNTHESIS OF OLIGOSACCHARIDES BY GROWING CULTURE OF LEUCONOSTOC MESENTEROIDES. PART II. PREPARATION OF KOJIBIOSE] (IN JAPANESE, ENGLISH ABSTRACT). NIPPON NOGEI KAGAKU KAISHI. 33:359-362.

(256) STODOLA, F. H., E. S. SHARPE, AND H. J. KOEPSELL. 1956. THE PREPARATION, PROPERTIES AND STRUCTURE OF THE DISACCHARIDE LEUCROSE. J. AM. CHEM. SOC. 78:2514-2518.

(257) ------. 1958. TRANSGLYCOSYLATION. IN F. H. STODOLA, CHEMICAL TRANSFORMATIONS BY MICROORGANISMS, PP. 65-87. JOHN WILEY AND SONS, INC., NEW YORK.

(258) SUZUKI, H., AND E. J. HEHRE. 1964. LACTULOSUCROSE (4F-BETA-GALACTOSYLSUCROSE), A NEW TRISACCHARIDE SYNTHESIZED BY CULTURES OF LEUCONOSTOC MESENTEROIDES STRAIN K (NRRL B-1299). ARCH. BIOCHEM. BIOPHYS. 105:339-348.

(259) SUZUKI, Y., AND H. KATAGIRI. 1963. STUDIES ON DEXTRANSUCRASE I. FORMATION OF RIBOFLAVINYLGLUCOSIDE IN DEXTRAN-PRODUCING CULTURES OF LEUCONOSTOC MESENTEROIDES. J. VITAMINOL. 9:285-292.

(260) ------ AND H. KATAGIRI. 1963. STUDIES ON DEXTRANSUCRASE II. FACTORS AFFECTING THE FORMATION OF RIBOFLAVINYLGLUCOSIDE IN GROWING CULTURES OF LEUCONOSTOC MESENTEROIDES. J. VITAMINOL. 9:293-298.

(261) ------. 1965. STUDIES ON DEXTRANSUCRASE III. ISOLATION AND PROPERTIES OF THE ENZYME OF LEUCONOSTOC MESENTEROIDES PRODUCING RIBOFLAVINYLGLUCOSIDE. J. VITAMINOL. 11:95-101.

(262) ------ AND K. UCHIDA. 1965. STUDIES ON DEXTRANSUCRASE IV. PRODUCTION OF RIBOFLAVINYLGLYCOSIDES AND DEXTRANS BY VARIOUS STRAINS OF LEUCONOSTOC MESENTEROIDES. J. VITAMINOL. 11:313-319.

(263) ------. 1965. STUDIES ON DEXTRANSUCRASE V. FORMATION OF RIBOFLAVINYLGLUCOSIDE BY THE INTRACELLULAR ENZYME OF LEUCONOSTOC MESENTEROIDES GROWN ON SUCROSE. J. VITAMINOL. 11:320-326.

(264) ------ AND K. UCHIDA. 1967. [STUDIES ON DEXTRANSUCRASE PART VI. PREPARATION OF CRYSTALLINE 5'-D-RIBOFLAVIN-D-GLUCOPYRANOSIDE BY LEUCONOSTOC MESENTEROIDES] (IN JAPANESE, ENGLISH ABSTRACT). NIPPON NOGEI KAGAKU KAISHI 41(4):125-129. ALSO IN CHEM. ABSTR. 1967. 67:71268N.

(265) ------ AND K. UCHIDA. 1967. [STUDIES ON DEXTRANSUCRASE. VII. FORMATION OF RIBOFLAVIN COMPOUNDS OF GLUCOSYL OLIGOSACCHARIDE BY LEUCONOSTOC MESENTEROIDES] (IN JAPANESE, ENGLISH ABSTRACT). VITAMINS 35:27-30. ALSO IN CHEM. ABSTR. 1967. 66:63007R.

(266) ------ AND K. UCHIDA. 1967. [STUDIES ON DEXTRANSUCRASE. VIII. ISOLATION AND IDENTIFICATION OF RIBOFLAVIN COMPOUNDS OF GLUCOSYL OLIGOSACCHARIDE] (IN JAPANESE, ENGLISH ABSTRACT). VITAMINS 35:31-37. ALSO IN CHEM. ABSTR. 1967. 66:91757D.

(267) ------ AND K. UCHIDA. 1968. [STUDIES ON DEXTRANSUCRASE. IX. PRODUCTION OF RIBOFLAVIN GLUCOSIDE BY MEMBERS OF THE GENUS LACTOBACILLUS AND STREPTOCOCCUS] (IN JAPANESE, ENGLISH ABSTRACT). NIPPON NOGEI KAGAKU KAISHI 42(4):228-232. ALSO IN CHEM. ABSTR. 1968. 69:49925U.

(268) ------ AND K. UCHIDA. 1967. PRODUCTION OF GLUCOSYL COMPOUNDS OF RIBOFLAVINE AND DEXTRANS BY VARIOUS STRAINS OF LEUCONOSTOC MESENTEROIDES. BER. OHARA INST. LANDWIRTSCH. BIOL. OKAYAMA UNIV. 14(1):1-8. ALSO IN CHEM. ABSTR. 1968. 68:102687A.

(269) ------. 1967. FORMATION OF RIBOFLAVINYL GLUCOSIDE BY INTRACELLULAR ENZYME OF LEUCONOSTOC MESENTEROIDES GROWN ON SUCROSE. BER. OHARA INST. LANDWIRTSCH. BIOL. OKAYAMA UNIV. 14(1):9-15. ALSO IN CHEM. ABSTR. 1968. 68:102688B.

(270) ------, K. UCHIDA, AND T. MIYAKE. 1970. VITAMIN B2-GLYCOSIDES. XXIV. [FORMATION OF PYRIDOXINE GLYCOSIDE-LIKE COMPOUNDS BY ENZYME PREPARATIONS HAVING ACTIVITY FOR FORMING RIBOFLAVINE GLYCOSIDES] (IN JAPANESE). VITAMINS 42(3):187-192. ALSO IN CHEM. ABSTR. 1971. 74:9712U.

(271) ------ AND K. UCHIDA. 1971. [STABILITY OF 5'-D-RIBOFLAVINE-ALPHA-D-GLUCOPYRANOSIDE IN THE PRESENCE OF LIGHT AND THE DEGREE OF ITS BITTER TASTE] (IN JAPANESE). VITAMINS 43(2):74-77. ALSO IN CHEM. ABSTR. 1971. 75:4269R.

(272) ------ AND K. UCHIDA. 1971. [RIBOFLAVINE GLYCOSYL COMPOUNDS. XXII. MECHANISM OF 5'-D-RIBOFLAVINE ALPHA-D-GLUCOPYRANOSIDE FORMATION BY LEUCONOSTOC MESENTEROIDES] (IN JAPANESE, ENGLISH ABSTRACT). NIPPON NOGEI KAGAKU KAISHI 45(6):247-252. ALSO IN CHEM. ABSTR. 1971. 75:148790B.

(273) ------ AND K. UCHIDA. 1969. [STUDIES ON RIBOFLAVIN GLYCOSIDES. PART XV. ON MICROBIOLOGICAL ACTIVITIES OF RIBOFLAVIN HEXOSIDES] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 43(11):747-749. ALSO IN CHEM. ABSTR. 1970. 72:97553C.

(274) TSUCHIYA, H. M., AND C. S. STRINGER. 1954. TRANS-GLUCOSYLATION REACTIONS OF ENZYME PREPARATIONS FROM LEUCONOSTOC MESENTEROIDES NRRL B-512 [ABSTRACT P10]. BACTERIOL. PROC. 98-99.

(275) UCHIDA, K., AND Y. SUZUKI. 1968. [STUDIES ON DEXTRANSUCRASE. X. DECOMPOSITION OF RIBOFLAVIN GLUCOSYL COMPOUNDS BY CELL-FREE EXTRACTS OF LEUCONOSTOC MESENTEROIDES GROWN ON SUCROSE] (IN JAPANESE, ENGLISH ABSTRACT). NIPPON NOGEI KAGAKU KAISHI 42(8):502-508. ALSO IN CHEM. ABSTR. 1969. 70:25845N.

(276) YAMAUCHI, F., AND Y. OHWADA. 1969. SYNTHESIS OF OLIGOSACCHARIDES BY GROWING CULTURE OF LEUCONOSTOC MESENTEROIDES. PART IV. OLIGOSACCHARIDE FORMATION IN THE PRESENCE OF VARIOUS TYPES OF GLUCOBIOSES AS ACCEPTORS. AGRIC. BIOL. CHEM. 33:1295-1300.

SEE ALSO: 117 302

E. General Reviews

(277) EBERT, K. H., AND G. SCHENK. 1968. MECHANISMS OF BIOPOLYMER GROWTH: THE FORMATION OF DEXTRAN AND LEVAN. ADV. ENZYMOL. RELAT. AREAS MOL. BIOL. 30:179-221.

(278) HEHRE, E. J. 1948. THE BIOLOGICAL SYNTHESIS OF POLYSACCHARIDES. N.Y. ACAD. SCI. TRANS. 10:188-198.

(279) ------. 1951. ENZYMIC SYNTHESIS OF POLYSACCHARIDES: A BIOLOGICAL TYPE OF POLYMERIZATION. ADV. ENZYMOL. RELAT. SUBJ. BIOCHEM. 11:297-337.

(280) HESTRIN, S. 1949. FERMENTATION OF DISACCHARIDES. II. SUCROSE. WALLERSTEIN LAB. COMMUN. 12:45-54.

(281) ------. 1953. MECHANISM OF DEGRADATION AND SYNTHESIS AND SOME BIOLOGICAL ACTIVITIES OF INTERCELLULAR BACTERIAL POLYSACCHARIDES. IN MICROBIAL METABOLISM SYMPOSIUM, SEPTEMBER 7-11, PP. 63-70. INSTITUTO SUPERIOR DI SANITA, ROME, ITALY.

(282) NEELY, W. B. 1960. DEXTRAN: STRUCTURE AND SYNTHESIS. ADV. CARBOHYDR. CHEM. 15:341-369.

IV. Enzymatic degradation of dextrans and of isomaltose and its oligomers

References related to dental caries are in section XXIII. References to enzymatic degradation in mammalial mucosa and other tissues are in section XX.

Dextranase (1,6-α-*D*-glucan 6-glucanohydrolase, E.C. 3.2.1.11).

Recommendations (1972) of the International Union of Pure and Applied Chemistry and the International Union of Biochemistry; Commission on Biochemical Nomenclature on the Nomenclature and Classification of Enzymes. Elsevier Scientific Publishing Co., Amsterdam, The Netherlands; American Elsevier Publishing Co., Inc., New York, N.Y.

A. Dextranases—Sources

(283) BENEDICT, R. G., T. G. PRIDHAM, L. A. LINDENFELSER, AND OTHERS. 1955. FURTHER STUDIES IN THE EVALUATION OF CARBOHYDRATE UTILIZATION TESTS AS AIDS IN THE DIFFERENTIATION OF SPECIES OF STREPTOMYCES. APPL. MICROBIOL. 3:1-6.

(284) BERNIER, B. 1958. CHARACTERIZATION OF POLYSACCHARIDES ISOLATED FROM FOREST SOILS. BIOCHEM. J. 70:590-598.

(285) CHARLES, A. F., AND L. N. FARRELL. 1957. PREPARATION AND USE OF ENZYMATIC MATERIAL FROM P. LILACINUM TO YIELD CLINICAL DEXTRAN. CAN. J. MICROBIOL. 3:240-247.

(286) CLARKE, R. T. J. 1959. A DEXTRAN-FERMENTING ORGANISM FROM THE RUMEN CLOSELY RESEMBLING LACTOBACILLUS BIFIDUS. J. GEN. MICROBIOL. 20:549-553.

(287) CROWLEY, N. 1951. POLYSACCHARIDASES OF GROUP A STREPTOCOCCI. J. GEN. MICROBIOL. 5:239-249.

(288) DASMOHAPATRA, B., AND A. THANGAMANI. 1974. PRODUCTION OF AN EXTRACELLULAR DEXTRANASE BY PENICILLIUM JANTHINELLUM. INDIAN J. MICROBIOL. 14:177-179. ALSO IN CHEM. ABSTR. 1975. 83:204794K.

(289) DEACONU-PELEA, M., S. KISS, F. LORINCZI, AND M. DRAGEN-BULARDA. 1973. [APPLICATION OF THE KAOLIN-AGGREGATE METHOD FOR ISOLATION OF POLYSACCHARIDOLYTIC MICROMYCETES] (IN ROMANIAN). STUD. UNIV. BABES BOLYAI SER. BIOL. 18(2):135-143. ALSO IN CHEM. ABSTR. 1974. 80:26319N.

(290) FISCHER, E. H., AND E. A. STEIN. 1960. DEXTRANASES (A REVIEW.) IN P. D. BOYER, H. LARDY, AND K. MYRBACK, ED. THE ENZYMES, VOL. 4, PART 4, PP. 304-307. ACADEMIC PRESS, INC., NEW YORK AND LONDON.

(291) FUKUMOTO, J., H. TSUJI, AND D. TSURU. 1971. STUDIES ON MOLD DEXTRANASES. I. PENICILLIUM LUTEUM DEXTRANASE: ITS PRODUCTION AND SOME ENZYMATIC PROPERTIES. J. BIOCHEM. (TOKYO) 69:1113-1121.

(292) HEYN, A. N. J. 1970. DEXTRANASE ACTIVITY IN COLEOPTILES OF AVENA. SCIENCE 167:874-875.

(293) INGELMAN, B. 1948. ENZYMATIC BREAKDOWN OF DEXTRAN. ACTA CHEM. SCAND. 2:803-812.

(294) JOSHI, V. K., AND D. V. TAMHANE. 1973. LOCATION OF DEXTRANASE ACTIVITY IN AN ASPERGILLUS LUCHUENSIS SPECIES ISOLATE. CURR. SCI. 42(20):720-721. ALSO IN CHEM. ABSTR. 1974. 80:13626K.

(295) KOBAYASHI, T. 1954. [STUDIES ON DEXTRAN. IV. DEXTRAN-DESTROYING ENZYME OF MOLDS] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 28:352-357. ALSO IN CHEM. ABSTR. 1954. 48:12194G.

(296) MENCIER, F. 1972. [A SIMPLE AND RAPID METHOD FOR SHOWING MICROORGANISMS WHICH PRODUCE DEXTRANASE] (IN FRENCH). ANN. INST. PASTEUR. PARIS 122:153-157.

(297) NORDSTROM, L., AND E. HULTIN. 1948. DEXTRANASE, A NEW ENZYME FROM MOULD. SVEN. KEM. TIDSKR. 60:283-284.

(298) PREOBRAZHENSKAYA, M. E., AND A. L. MINAKOVA. 1975. [DEXTRANASE OF PENICILLIUM PURPUROGENUM] (IN RUSSIAN). DOKL. AKAD. NAUK SSSR 224(2):483-486. ALSO IN CHEM. ABSTR. 1976. 84:1613Y.

(299) SAWAI, T. 1964. A POSSIBLE CAPACITY OF CANDIDA TRANSGLUCOSYL-AMYLASE TO HYDROLYZE DEXTRAN AND NIGERAN. BULL. AICHI GAKUGEI UNIV. NAT. SCI. 13:25-40. ALSO IN CHEM. ABSTR. 1965. 62:1909H.

(300) ------. 1965. [THE BROAD SUBSTRATE SPECIFICITY OF CANDIDA TRANSGLUCOSYL-AMYLASE, WITH SPECIAL REFERENCE TO THE CAPACITY OF THE ENZYME TO HYDROLYZE DEXTRAN, NIGERAN AND ISOLICHENIN] (IN JAPANESE). IN PROCEEDINGS OF THE AMYLASE SYMPOSIUM, PP. 54-61. SOCIETY OF APPLIED ENZYMOLOGY, JAPAN.

(301) ------, K. TORIYAMA, AND K. YANO. 1974. A BACTERIAL DEXTRANASE RELEASING ONLY ISOMALTOSE FROM DEXTRANS. J. BIOCHEM. (TOKYO) 75:105-112.

(302) ------ AND Y. NIWA. 1975. TRANSISOMALTOSYLATION ACTIVITY OF A BACTERIAL ISOMALTO-DEXTRANASE. AGRIC. BIOL. CHEM. 39(5):1077-1083.

(303) SIMONSON, L. G., B. L. LAMBERTS, AND I. L. SHKLAIR. 1972. RAPID PLATE METHOD FOR SCREENING DEXTRANASE-PRODUCING MICROORGANISMS. J. DENT. RES. 51(2)(PART 2):675.

(304) ------ AND A. E. LIBERTA. 1975. NEW SOURCES OF FUNGAL DEXTRANSE. MYCOLOGIA 67:845-851.

(305) TORII, M., K. SAKAKIBARA, A. MISAKI, AND T. SAWAI. 1976. DEGRADATION OF ALPHA-LINKED D-GLUCO-OLIGOSACCHARIDES AND DEXTRANS BY AN ISOMALTO-DEXTRANASE PREPARATION FROM ARTHROBACTER GLOBIFORMIS T6. BIOCHEM. BIOPHYS. RES. COMMUN. 70(2):459-464.

(306) TSUCHIYA, H. M., A. JEANES, H. M. BRICKER, AND C. A. WILHAM. 1952. DEXTRAN-DEGRADING ENZYMES FROM MOLDS. J. BACTERIOL. 64:513-519.

(307) TSURU, D., N. HIRAOKA, T. HIROSE, AND J. FUKUMOTO. 1971. STUDIES ON MOLD DEXTRANASES. PART II. DEXTRANASE PRODUCTION BY A STRAIN OF ASPERGILLUS CARNEUS. AGRIC. BIOL. CHEM. 35:1727-1732. OF BACILLUS SPECIES. CARBOHYDR. RES. 6:310-318.

(308) VINOGRADOVA, K. A., G. V. CHERKESOVA, L. I. PETROVA, AND OTHERS. 1975. [DEXTRANASE FORMATION BY MYCELIAL FUNGI AND ACTINOMYCETES] (IN RUSSIAN). PRIKL. BIOKHIM. MIKROBIOL. 11(5):730-735. ALSO IN CHEM. ABSTR. 1975. 83:203569D.

(309) WHITESIDE-CARLSON, V., AND W. W. CARLSON. 1952. ENZYMATIC HYDROLYSIS OF DEXTRAN. SCIENCE 115:43.

(310) YAMAGUCHI, T., AND S. GOCHO. 1973. PRODUCTION AND PROPERTIES OF ALKALINE DEXTRANASE FROM A NEWLY ISOLATED BREVIBACTERIUM. AGRIC. BIOL. CHEM. 37:2527-2533.

(311) ZEVENHUIZEN, L. P. T. M. 1968. CELL-BOUND EXODEXTRANASE OF BACILLUS SPECIES. CARBOHYDR. RES. 6:310-318.

SEE ALSO: 103 330 334 2004
2297 THROUGH 2324 PATENT SECTION XXIX A

B. Dextranases

Production and purification; properties; activity and assay.

(312) BAASTAD, K. L., AND G. ROLLA. 1970. PURIFICATION AND SOME PROPERTIES OF DEXTRANASE FROM PENICILLIUM FUNICULOSUM. SCAND. J. DENT. RES. 78:452-456.

(313) BROWN, R. G. 1970. STIMULATION OF DEXTRANASE PRODUCTION BY OXIDIZED DEXTRAN. CAN. J. MICROBIOL. 16:841-846.

(314) ------ AND B. LINDBERG. 1974. ENZYMIC HYDROLYSIS OF KETODEXTRAN. CARBOHYDR. RES. 38:369-373.

(315) CHAIET, L., A. J. KEMPF, R. HARMAN, AND OTHERS. 1970. ISOLATION OF A PURE DEXTRANASE FROM PENICILLIUM FUNICULOSUM. APPL. MICROBIOL. 20:421-426.

(316) CHEETHAM, N. W. H., AND G. N. RICHARDS. 1972. STUDIES ON DEXTRANASES. PART II. AN INTRACELLULAR BACTERIAL DEXTRANASE. CARBOHYDR. RES. 25:333-339.

(317) ------ AND G. N. RICHARDS. 1973. STUDIES ON DEXTRANASES. PART III. INSOLUBILIZATION OF A BACTERIAL DEXTRANASE. CARBOHYDR. RES. 30:99-107.

(318) GUGGENHEIM, B., AND J. J. BURCKHARDT. 1974. ISOLATION AND PROPERTIES OF A DEXTRANASE FROM STREPTOCOCCUS MUTANS OMZ 176. HELV. ODONTOL. ACTA 18:101-113.

(319) HIRAOKA, N., J. FUKUMOTO, AND D. TSURU. 1972. STUDIES ON MOLD DEXTRANASES: III. PURIFICATION AND SOME ENZYMATIC PROPERTIES OF ASPERGILLUS CARNEUS DEXTRANASE. J. BIOCHEM. (TOKYO) 71:57-64.

(320) ------, H. TSUJI, J. FUKUMOTO, AND OTHERS. 1973. STUDIES ON MOLD DEXTRANASES: SOME PHYSICOCHEMICAL PROPERTIES AND SUBSTRATE SPECIFICITY OF DEXTRANASES OBTAINED FROM ASPERGILLUS CARNEUS AND PENICILLIUM LUTEUM. INST. J. PEPT. PROTEIN RES. 5(3):161-169. ALSO IN MICROBIOL. ABSTR. 1974. SEC. C, 3(1):3C195.

(321) HULTIN, E., AND L. NORDSTROM. 1949. INVESTIGATIONS ON DEXTRANASE. I. ON THE OCCURRENCE AND ASSAY OF DEXTRANASE. ACTA CHEM. SCAND. 3:1405-1417.

(322) ------. STATISTICAL CALCULATIONS OF THE ACCURACY OF THE MICHAELIS CONSTANT FROM VISCOSIMETRIC DETERMINATIONS OF POLYMETAPHOSPHATASE AND DEXTRANASE ACTIVITY. ACTA CHEM. SCAND. 21:1575-1580.

(323) ISENBERG, D. L. 1975. FERMENTATION ACHIEVES NEW HIGH IN FLEXIBILITY. [DEXTRANASE: A PRODUCT OF MANY USES.] CHEM. ENG. 82(10):56-58.

(324) JANSON, J-C., AND J. PORATH. 1966. A BACTERIAL DEXTRANASE. METHODS ENZMOL. 8:615-621.

(325) ------. 1972. STUDIES ON DEXTRAN DEGRADING ENZYMES FROM BACTERIA AND MOLDS: WITH SPECIAL EMPHASIS ON A MEMBRANE BOUND DEXTRANASE FROM THE CELL ENVELOPE OF CYTOPHAGA JOHNSONII. UPPSALA DISSERTATIONS FROM THE FACULTY OF SCIENCE. ACTA UNIVERSITATIS UPSALIENSIS, 5:1-163. UPPSALA, SWEDEN.

(326) ------. 1975. STUDIES ON DEXTRAN-DEGRADING ENZYMES. ISOLATION AND IDENTIFICATION OF A DEXTRANASE-PRODUCING STRAIN OF CYTOPHAGA JOHNSONII AND STUDIES ON THE FORMATION OF THE SURFACE-BOUND ENZYME. J. GEN. MICROBIOL. 88:205-208.

(327) ------. 1975. STUDIES ON DEXTRAN-DEGRADING ENZYMES. SOLUBILIZATION OF THE SURFACE-BOUND DEXTRANASE OF CYTOPHAGA JOHNSONII BY PROTEOLYTIC ENZYMES, SNAKE VENOMS AND DETERGENTS. J. GEN. MICROBIOL. 88:209-217.

(328) KIDDER, D. E., F. W. G. HILL, AND J. A. STEVENS. 1972. AUTOMATIC MEASUREMENT OF SOME MUCOSAL CARBOHYDRASES. CLIN. CHIM. ACTA 37:491-501.

(329) KOH, T. Y., AND B. T. KHOUW. 1970. A RAPID METHOD FOR THE ASSAY OF DEXTRANASE. CAN. J. BIOCHEM. 48:225-227.

(330) KOSARIC, N., K. YU, J. E. ZAJIC, AND J. ROZANIS. 1973. DEXTRANASE PRODUCTION FROM PENICILLIUM FUNICULOSUM. BIOTECHNOL. BIOENG. 15:729-741.

(331) MAEKINEN, K. K., AND I. K. PAUNIO. 1970. EXPLOITATION OF BLUE DEXTRAN AS A DEXTRANASE SUBSTRATE. SCAND. J. CLIN. LAB. INVEST. SUPPL. 25(113):54. ALSO IN ANAL. BIOCHEM. 1971. 39:202-207.

(332) REESE, E. T., J. E. LOLA, AND F. W. PARRISH. 1969. MODIFIED SUBSTRATES AND MODIFIED PRODUCTS AS INDUCERS OF CARBOHYDRASES. J. BACTERIOL. 100:1151-1154.

(333) RICHARDS, G. N., AND M. STREAMER. 1972. STUDIES ON DEXTRANASES. PART I. ISOLATION OF EXTRACELLULAR BACTERIAL DEXTRANASES. CARBOHYDR. RES. 25:323-332.

(334) ------ AND M. STREAMER. 1974. STUDIES ON DEXTRANASES. PART IV. MODE OF ACTION OF DEXTRANASE D1 ON OLIGOSACCHARIDES. CARBOHYDR. RES. 32:251-260.

(335) SIMONSON, L. G., A. E. LIBERTA, AND A. RICHARDSON. 1975. CHARACTERIZATION OF AN EXTRACELLULAR DEXTRANASE FROM FUSARIUM MONILIFORME. APPL. MICROBIOL. 30:855-861.

(336) SUGIURA, M., A. ITO, T. OGISO, AND OTHERS. 1973. STUDIES ON DEXTRANASE. PURIFICATION OF DEXTRANASE FROM PENICILLIUM FUNICULOSUM AND ITS ENZYMATIC PROPERTIES. BIOCHIM. BIOPHYS. ACTA 309:357-362.

(337) ------, A. ITO, AND T. YAMAGUCHI. 1974. STUDIES ON DEXTRANASE. II. NEW EXO-DEXTRANASE FROM BREVIBACTERIUM FUSCUM VAR. DEXTRANLYTICUM. BIOCHIM. BIOPHYS. ACTA. 350:61-70.

(338) ------ AND A. ITO. STUDIES ON DEXTRANASE. IV. IMMOBILIZATION OF DEXTRANASE FROM PENICILLIUM FUNICULOSUM IAM 7013. CHEM. PHARM. BULL. 22(12):2941-2946. ALSO IN MICROBIOL. ABSTR. 1975. SEC. A, 10(11):10A7572.

(339) ------, A. ITO, T. OGISO, AND K. KATO. 1974. STUDIES ON DEXTRANASE. V. ACTIVATION OF DEXTRANASE FROM PENICILLIUM FUNICULOSUM IAM 7013 BY COBALTOUS ION. CHEM. PHARM. BULL. 22(12):2953-2958. ALSO IN MICROBIOL. ABSTR. 1975. SEC. A, 10(11):10A7573.

(340) ------ AND A. ITO. 1975. STUDIES ON DEXTRANASE. VIII. SOME ENZYMATIC PROPERTIES OF IMMOBILIZED DEXTRANASE FROM BREVIBACTERIUM FUSCUM VAR. DEXTRANLYTICUM. CHEM. PHARM. BULL. 23(12):3223-3227. ALSO IN CHEM. ABSTR. 1976. 84:71005A.

SEE ALSO: 334 348 2025 2077 2318 2297 THROUGH 2324 PATENT SECTION XXIX A

C. Dextranases—Action on Dextrans

Specificity, mechanism, and the oligosaccharide products.

(341) BAILEY, R. W., AND R. T. J. CLARKE. 1959. A BACTERIAL DEXTRANASE. BIOCHEM. J. 72:49-54.

(342) ------, D. H. HUTSON, AND H. WEIGEL. 1960. ACTION OF A BACTERIAL DEXTRANASE ON BRANCHED DEXTRANS. NATURE (LONDON) 186:553-554.

(343) ------, D. H. HUTSON, AND H. WEIGEL. 1961. THE ACTION OF LACTOBACILLUS BIFIDUS DEXTRANASE ON A BRANCHED DEXTRAN. BIOCHEM. J. 80:514-519.

(344) ------ AND A. M. ROBERTON. 1962. CARBOHYDRASES OF A RUMEN STRAIN OF LACTOBACILLUS BIFIDUS 2. THE INTRACELLULAR ALPHA-1,6-GLUCOSIDASE (ISOMALTODEXTRINASE). BIOCHEM. J. 82:272-277.

(345) BARKER, S. A., A. G. GIBLIN, C. J. GRAY, AND W. H. BOWEN. 1974. PREPARATION AND PROPERTIES OF A CONJUGATE CONTAINING DEXTRANASE AND CONCANAVALIN A. CARBOHYDR. RES. 36:23-33.

(346) BOURNE, E. J., D. H. HUTSON, AND H. WEIGEL. 1962. STUDIES ON DEXTRANS AND DEXTRANASES 2. THE ACTION OF MOULD DEXTRANASES ON MODIFIED ISOMALTODEXTRINS AND THE EFFECT OF ANOMALOUS LINKAGES ON DEXTRAN HYDROLYSIS. BIOCHEM. J. 85:158-163.

(347) ------, D. H. HUTSON, AND H. WEIGEL. 1963. STUDIES ON DEXTRANS AND DEXTRANASES. 3. STRUCTURES OF OLIGOSACCHARIDES FROM LEUCONOSTOC MESENTEROIDES (BIRMINGHAM) DEXTRAN. BIOCHEM. J. 86:555-562.

(348) CESKA, M. 1971. THE SYNTHESIS OF CROSS-LINKED DEXTRAN AND ITS ENZYMATIC HYDROLYSIS. EXPERIENTIA 27(11):1263.

(349) ------. 1972. ENHANCEMENT OF ENZYMATIC CATALYSIS OF CROSS-LINKED DEXTRAN IN THE PRESENCE OF NON-IONIC POLYMER. EXPERIENTIA. 28:146.

(350) DWYER, D. M. 1974. LECTIN BINDING SACCHARIDES ON A PARASITIC PROTOZOAN. SCIENCE 184:471-473.

(351) HUTSON, D. H., AND H. WEIGEL. 1963. STUDIES ON DEXTRANS AND DEXTRANASES 4. MECHANISMS OF THE ACTIONS OF INTRA- AND EXTRA-CELLULAR MOULD HYDROLASES. BIOCHEM. J. 88:588-591.

(352) KOBAYASHI, T. 1957. DEXTRAN. V. DEXTRAN-DESTROYING ENZYME OF MOLDS. 2. MONOENZYMIC NATURE OF MOLD DEXTRANASE AND THE ACTIVATION ENERGY IN THE HYDROLYSIS OF ALPHA-1,6-GLUCOSIDIC LINKAGES. NIPPON NOGEI KAGAKU KAISHI 31:494-496. ALSO IN CHEM. ABSTR. 1958. 52:1316H.

(353) ------. 1957. DEXTRAN. VI. DEXTRAN-DESTROYING ENZYME OF MOLDS. 3. MICHAELIS CONSTANT FOR DEXTRANASE-DEXTRAN SYSTEM AND ITS VARIATION WITH MOLECULAR WEIGHT OF THE SUBSTRATE. NIPPON NOGEI KAGAKU KAISHI 31:497-500. ALSO IN CHEM. ABSTR. 1958. 52:1317A.

(354) REESE, E. T., AND M. MANDELS. 1964. A NEW ALPHA-GLUCANASE: MYCODEXTRANASE. CAN. J. MICROBIOL. 10:103-114.

(355) ------, A. H. MAGUIRE, AND F. W. PARRISH. 1968. GLUCOSIDASES AND EXO-GLUCANASES. CAN. J. BIOCHEM. 46:25-34.

(356) STAAT, R. H., AND C. F. SCHACHTELE. 1975. CHARACTERIZATION OF A DEXTRANASE PRODUCED BY AN ORAL STRAIN OF ACTINOMYCES ISRAELII. INFECT. IMMUN. 12:556-563.

(357) SUGIURA, M., AND A. ITO. 1974. STUDIES ON DEXTRANASE. III. ACTION PATTERNS OF DEXTRANASE FROM PENICILLIUM FUNICULOSUM ON SUBSTRATE AND INHIBITION ON HYDROLYSIS REACTION BY SUBSTRATE ANALOGUES. CHEM. PHARM. BULL. 22(7):1593-1599. ALSO IN MICROBIOL. ABSTR. 1975. SEC. C, 4(3):4C1550.

(358) TSURU, D., N. HIRAOKA, AND J. FUKUMOTO. 1972. STUDIES ON MOLD DEXTRANASES IV. SUBSTRATE SPECIFICITY OF ASPERGILLUS CARNEUS DEXTRANASE. J. BIOCHEM. 71:653-660.

(359) WALKER, G. J., AND A. PULKOWNIK. 1973. DEGRADATION OF DEXTRANS BY AN ALPHA-1,6-GLUCAN GLUCOHYDROLASE FROM STREPTOCOCCUS MITIS. CARBOHYDR. RES. 29:1-14.

SEE ALSO: 306 316 325 334 337
379 THROUGH 381 531 544 586 THROUGH 590
592 596 606 783 1045 1795 2025
2297 THROUGH 2324 2511

D. Various Polysaccharidases Tested on Dextrans

(Selected references.)

(360) BENDER, H., AND K. WALLENFELS. 1961. [INVESTIGATIONS ON PULLULAN II. SPECIFIC DEGRADATION BY A BACTERIAL ENZYME] (IN GERMAN). BIOCHEM. Z. 334:79-95.

(361) HANRAHAN, V. M., AND M. L. CALDWELL. 1953. THE ACTION OF TAKA-AMYLASE. J. AM. CHEM. SOC. 75:2191-2197.

(362) HOBSON, P. N., W. J. WHELAN, AND S. PEAT. 1950. THE "DE-BRANCHING" ENZYME IN BEAN AND POTATO. BIOCHEM. J. 47:XXXIX.

(363) LOYTER, A., AND M. SCHRAMM. 1966. MULTIMOLECULAR COMPLEXES OF ALPHA-AMYLASE WITH GLYCOGEN LIMIT DEXTRIN. (NO ACTION ON DEXTRAN.) J. BIOL. CHEM. 241:2611-2617.

(364) MILLER, K. D., AND W. H. COPELAND. 1956. A BLOOD TRANS-ALPHA-GLUCOSYLASE. (INERT ON DEXTRAN.) BIOCHIM. BIOPHYS. ACTA 22:193-194.

(365) PHILLIPS, L. L., AND M. L. CALDWELL. 1951. A STUDY OF THE ACTION OF GLUC AMYLASE, A GLUCOSE-PRODUCING AMYLASE, FORMED BY THE MOLD, RHIZOPUS DELEMAR. J. AM. CHEM. SOC. 73:3563-3568.

(366) SWANSON, M. A. 1948. STUDIES ON THE STRUCTURE OF POLYSACCHARIDES. II. DEGRADATION OF POLYSACCHARIDES BY ENZYMES. J. BIOL. CHEM. 172:805-814.

SEE ALSO: 306 1477 2302 2507 2517

E. Action of Dextranases, Isomaltase, and α-Glucosidases on Isomaltose and Its Oligomers

(367) GORMAN, J., AND H. HALVORSON. 1966. ISOMALTASE FROM YEAST. METHODS ENZYMOL. 8:562-565.

(368) HAMAUZU, Z-I., K. HIROMI, AND S. ONO. 1965. QUANTITATIVE DETERMINATION OF ANOMERIC FORMS OF SUGAR PRODUCED BY AMYLASES. II. GLUC-AMYLASE-ISOMALTOSE SYSTEM. J. BIOCHEM. (TOKYO) 57:39-41.

(369) JORGENSEN, B. B., AND O. B. JORGENSEN. 1963. BARLEY MALT ALPHA-GLUCOSIDASE WITH ISOMALTASE ACTIVITY I. EXTRACTION AND PURIFICATION. ACTA

(370) JORGENSEN, O. B. 1963. BARLEY MALT ALPHA-
CHEM. SCAND. 17:1765-1770.
GLUCOSIDASE II. STUDIES ON THE SUBSTRATE SPECIFICITY. ACTA CHEM. SCAND. 17:2471-2478.

(371) LIEBERMAN, I., AND W. H. ETO. 1957. PURIFICATION AND PROPERTIES OF EQUINE SERUM MALTASE. J. BIOL. CHEM. 225:899-908.

(372) MANNERS, D. J., AND K. L. ROWE. 1969. STUDIES ON CARBOHYDRATE-METABOLISING ENZYMES PART XXI. THE ALPHA-GLUCOSIDASE AND D-ENZYME ACTIVITY OF EXTRACTS OF CARROTS AND TOMATOES. CARBOHYDR. RES. 9:441-450.

(373) MARSHALL, J. J. 1975. STARCH-DEGRADING ENZYMES, OLD AND NEW. (ENZYME OF CLADOSPORIUM RESINAE ACTIVE ON ISOMALTOSE, ISOMALTOTRIOSE, AND DEXTRAN.) STAERKE 27(11):377-383.

(374) PAZUR, J. H., AND K. KLEPPE. 1962. THE HYDROLYSIS OF ALPHA-D-GLUCOSIDES BY AMYLOGLUCOSIDASE FROM ASPERGILLUS NIGER. J. BIOL. CHEM. 237:1002-1005.

(375) SAWAI, T. 1960. STUDIES ON AN AMYLASE OF CANDIDA TROPICALIS VAR. JAPONICA. J. BIOCHEM. (TOKYO) 48:382-391.

(376) STINSON, E. E. 1955. PURIFICATION AND CHARACTERIZATION OF FUNGAL CARBOHYDRASES. IOWA STATE COLL. J. SCI. 29:509-510.

(377) TSUCHIYA, H. M., E. M. MONTGOMERY, AND J. CORMAN. 1949. HYDROLYSIS OF THE ALPHA-1,6-GLUCOSIDIC LINKAGE IN ISOMALTOSE BY CULTURE FILTRATE OF ASPERGILLUS NIGER NRRL 330. J. AM. CHEM. SOC. 71:3265.

(378) WALKER, G. J., AND J. E. BUILDER. 1967. METABOLISM OF THE RESERVE POLYSACCHARIDE OF STREPTOCOCCUS MITIS: PROPERTIES OF ALPHA-(1-6)-GLUCOSIDASE, ITS SEPARATION FROM TRANSGLUCOSYLASE, AND THE ACTION OF THE TWO ENZYMES ON BRANCHED OLIGOSACCHARIDES. BIOCHEM. J. 105:937-942.

(379) ------. 1973. PREPARATION OF ISOMALTOSE OLIGOSACCHARIDES LABELLED WITH 14C IN THE NON-REDUCING TERMINAL UNIT, AND THEIR USE IN STUDIES OF DEXTRANASE ACTIVITY. CARBOHYDR. RES. 30:1-10.

(380) ------ AND A. PULKOWNIK. 1974. ACTION OF ALPHA-1,6-GLUCAN GLUCOHYDROLASE ON OLIGOSACCHARIDES DERIVED FROM DEXTRAN. CARBOHYDR. RES. 36:53-66.

(381) ------ AND M. D. DEWAR. 1975. THE ACTION PATTERN OF PENICILLIUM LILACINUM DEXTRANASE. CARBOHYDR. RES. 39:303-315.

SEE ALSO: 305 316 334 337 586 THROUGH 590 593 2005 2079 THROUGH 2081 2083

V. Production of clinical sized dextran

A. Industrial Production

Plant and equipment design, scale of operation; small-scale preliminary studies; methods for partial depolymerization; and fractionation and related topics.

(382) ANONYMOUS. 1952. DEXTRAN MANUFACTURE. MANUF. CHEM. 23(2):49-55.

(383) ------. 1952. DEXTRAN PINCH-HITS FOR PLASMA. CHEM. ENG. 59(9):215-218.

(384) ------. 1952. BLOOD PLASMA SUBSTITUTE. CHEM. ENG. 59(12):240-243.

(385) ------. 1953. PLANTS AND PROCESSES. NEW PLANTS AND FACILITIES UNDER WAY. CHEM. ENG. 60(2):183, 184, 188, 189, 199.

(386) ------. 1953. DEXTRAN PROCESSES: THEY ALL VARY, THEY ALL GROW. CHEM. WEEK 72(19):50-56.

(387) ------. 1954. INCREASING DEXTRAN YIELDS. CHEM. ENG. NEWS 32:2768.

(388) BEHRENS, U., M. RINGPFEIL, D. BRUCKNER, AND OTHERS. 1961. [THE TECHNICAL PREPARATION OF CLINICAL DEXTRAN BY CONTROLLED SYNTHESIS IN GROWING CULTURE] (IN GERMAN, ENGLISH SUMMARY). J. BIOCHEM. MICROBIOL. TECHNOL. ENG. 3:199-218.

(389) BERG, H., AND W. BEYER. 1956. [PHYSIOCHEMICAL STUDIES OF DEXTRANS. III. DEGRADATION OF HIGH-MOLECULAR DEXTRAN BY ACIDS, ULTRAVIOLET RADIATION, AND ULTRASONIC WAVES] (IN GERMAN). PHARMAZIE 11:462-470. ALSO IN CHEM. ABSTR. 1957. 51:7104E.

(390) BIXLER, G. H., G. E. HINES, R. M. MCGEE, AND R. A. SHURTER. 1953. DEXTRAN. IND. ENG. CHEM. 45:692-705. (DEXTRAN-CORRECTION. IND. ENG. CHEM. 45:1377)

(391) BRUZZESI, M. R., AND R. ZITO. 1967. DEPOLYMERIZATION OF DEXTRAN BY HYDROGEN PEROXIDE IN THE PRESENCE OF FERROUS SALTS. ITAL. J. BIOCHEM. 16:133-140.

(392) CARR, C., AND J. A. RIDDICK. 1951. PHYSICAL PROPERTIES OF METHANOL-WATER SYSTEM. IND. ENG. CHEM. 43:692-696.

(393) CHARLES, A. F., AND L. N. FARRELL. 1957. PREPARATION AND USE OF ENZYMATIC MATERIAL FROM P. LILACINUM TO YIELD CLINICAL DEXTRAN. CAN. J. MICROBIOL. 3:239-247.

(394) FARRAS, R. P., AND R. C. BALLUS. 1964. [PRODUCTION OF EXTRACELLULAR POLYSACCHARIDES.] (IN SPANISH). QUIM. IND. 11:135-137. ALSO IN CHEM. ABSTR. 1967. 67:10332G.

(395) FISHMAN, M. M., R. RABINOWITZ. 1955. THE PRECIPITATION OF DEXTRAN WITH NONAQUEOUS SOLVENTS. I. THE EFFECT OF ELECTROLYTES [ABSTRACT 41]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 128:20D.

(396) FOSTER, F. H. 1968. DEXTRAN--MANUFACTURE AND USE PART 1. (A REVIEW ON PRODUCTION OF NATIVE DEXTRAN AND ITS CONVERSION TO CLINICAL DEXTRAN.) PROCESS BIOCHEM. 3:15-19.

(397) ------. 1968. DEXTRAN--MANUFACTURE AND USE PART 2. (A REVIEW ON PRODUCTION OF LOW-MOLECULAR WEIGHT DEXTRAN AND VARIOUS PLASMA VOLUME EXPANDERS.) PROCESS BIOCHEM. 3:55-57; 62.

(398) FRISONE, G. J. 1954. DETERMINATION OF ISOPROPYL ALCOHOL IN DEXTRAN AND DEXTRAN SOLUTIONS. ANAL. CHEM. 26:924-925.

(399) HAMDY, M. K., Q. VAN WINKLE, G. L. STAHLY, AND OTHERS. 1956. FACTORS AFFECTING THE DEGRADATION PROCESSES FOR DEXTRAN. OHIO J. SCI. 56:41-51.

(400) HEHRE, E. J. 1952. AN UNUSUAL STREPTOCOCCUS THAT YIELDS LOW MOLECULAR WEIGHT (CLINICAL TYPE) DEXTRAN DIRECTLY [ABSTRACT A22]. BACTERIOL. PROC. 23.

(401) HELLMAN, N. N., H. M. TSUCHIYA, S. P. ROGOVIN, AND OTHERS. 1955. CONTROLLED ENZYMATIC SYNTHESIS OF DEXTRAN. CONDITIONS FOR PRODUCING CLINICALLY SUITABLE MOLECULAR WEIGHT. IND. ENG. CHEM. 47:1593-1598.

(402) HULTIN, E., AND L. NORDSTROM. 1954. THE DEPOLYMERIZATION OF DEXTRAN IN NON-AQUEOUS SOLUTIONS. ACTA CHEM. SCAND. 8:1296.

(403) INGELMAN, B., AND M. S. HALLING. 1949. SOME PHYSICO-CHEMICAL EXPERIMENTS ON FRACTIONS OF DEXTRAN. ARK. KEMI 1(10):61-80.

(404) LACKO, L., AND J. MALEK. 1957. [DEXTRAN. III. THE EFFECT OF SALTS ON THE SOLUBILITY OF PARTIALLY DEGRADED DEXTRANS IN AQUEOUS-ALCOHOLIC SOLUTION] (IN GERMAN). CHEM. LISTY 51:349-351. REPRINTED IN COLLECT. CZECH. CHEM. COMMUN. 22(4):1110-1113. ALSO IN CHEM. ABSTR. 1957. 51:7045H.

(405) ------ AND J. MALEK. 1957. [DEXTRAN. IV. THE EFFECT OF PHOSPHATE ON THE SOLUBILITY OF DEXTRANS OF VARIOUS MOLECULAR WEIGHTS IN AQUEOUS-ALCOHOLIC SOLUTIONS] (IN GERMAN). CHEM. LISTY 51:1435-1439. REPRINTED IN COLLECT. CZECH. CHEM. COMMUN. 1958. 23:361-366. ALSO IN CHEM. ABSTR. 1957. 51:17342C.

(406) ------ AND J. MALEK. 1957. [DEXTRAN. VI. THE EFFECT OF DEXTRAN CONCENTRATION, THE TEMPERATURE, AND THE PH ON THE SOLUBILITY OF DEXTRANS IN AQUEOUS-ALCOHOLIC SOLUTIONS AT VARIOUS IONIC STRENGTHS] (IN GERMAN). CHEM. LISTY 51:2006-2009. REPRINTED IN COLLECT. CZECH. CHEM. COMMUN. 1958. 23(5):828-832. ALSO IN CHEM. ABSTR. 1958. 52:3475B.

(407) ------, J. MALEK, AND J. DVORAKOVA. 1958. A NEW METHOD OF ISOLATION OF "CRUDE" CLINICAL DEXTRAN FRACTION BY PHOSPHATE PRECIPITATION. CHEM. IND. (LONDON) (47):1553-1554.

(408) ------, J. MALEK, AND J. DVORAKOVA. 1959. [DEXTRAN. VIII. THE EFFECT OF CATIONS AND SALT MIXTURES ON THE SOLUBILITY OF DEXTRANS IN AQUEOUS-ALCOHOLIC SOLUTION] (IN GERMAN). COLLECT. CZECH. CHEM. COMMUN. 24(9):2954-2958. ALSO IN CHEM. ABSTR. 1960. 54:1026A.

(409) LEIBNITZ, E., U. BEHRENS, AND M. RINGPFEIL. 1960. [MICROBIAL SYNTHESIS OF CLINICAL DEXTRAN BY THE PROCEDURE OF CONTROLLED SYNTHESIS] (IN GERMAN). WISS. Z. KARL MARX UNIV. LEIPZIG MATH. NATURWISS. REIHE 9:9-15. ALSO IN CHEM. ABSTR. 1962. 56:15961C.

(410) LEONARD, J. C., AND T. F. HARTMANN. 1954. DEXTRAN, CHEATER OF DEATH. IN W. D. O'TOOLE, ED., TAYLOR TECHNOLOGY, VOL. 6(3), PP. 3-8. TAYLOR INSTRUMENT COMPANIES, ROCHESTER, NEW YORK.

(411) LOCKWOOD, A. R., A. E. JAMES, AND F. G. PAUTARD. 1951. STUDIES ON THE BREAKDOWN PRODUCT OF DEXTRAN FORMED BY ULTRASONIC VIBRATION. RESEARCH 4:46-48.

(412) MANSKI, W., H. KOZDROJ, AND B. KLUBINSKA. 1953. [HYDROLYSIS AND FRACTIONATION OF DEXTRAN] (IN POLISH, ENGLISH SUMMARY). ARCH. IMMUNOL. TER. DOSW. 1:335-352. ALSO IN CHEM. ABSTR. 1956. 50:7216D.

(413) MARIANI, E. 1955. [DEXTRAN] (A REVIEW, IN FRENCH). SUCR. BELGE 75:61-75.

(414) MARKEVICH, S. V., S. S. KHARAMONENKO, P. T. GORBUNOV, AND OTHERS. 1964. [RADIOLYSIS OF POLYGLUKIN SOLUTIONS] (IN BELORUSSIAN). VESTSI AKAD. NAUK B. SSR SER. BIYAL. NAUK (3):107-113. ALSO IN CHEM. ABSTR. 1965. 62:13481F.

(415) NORTHERN UTILIZATION RESEARCH AND DEVELOPMENT DIVISION, PEORIA, ILLINOIS, ARS, USDA. 1958. FUNDAMENTAL LABORATORY AND ENGINEERING STUDIES ON CLINICAL-TYPE DEXTRAN PREPARED DIRECTLY BY CONTROLLED ENZYMATIC MEANS OR IN SELECTED WHOLE-CULTURE FERMENTATIONS AND PRODUCTION OF SAMPLES FOR ANIMAL AND CLINICAL INVESTIGATIONS. FINAL REPORT, SURGEON GENERAL'S OFFICE, PROJECT SG-O-2.

(416) PAUTARD, F. G. 1953. DEGRADATION OF DEXTRAN IN AN ALTERNATING ELECTRICAL FIELD. CHEM. IND. (LONDON) (49):1316-1317.

(417) PFEIFER, V. F., AND C. VOJNOVICH. 1952. CONTINUOUS STERILIZATION OF MEDIA IN BIOCHEMICAL PROCESSES. IND. ENG. CHEM. 44:1940-1946.

(418) POLUSHINA, T. V., V. Y. CHERNYAK, AND G. Y. ROZENBERG. 1962. [PREPARATION OF THE BLOOD SUBSTITUTE POLYGLUCIN BY THE METHOD OF CONTROLLED SYNTHESIS] (IN RUSSIAN). MED. PROMST. USSR 2:15-19. JOINT PUBLICATIONS RESEARCH SERVICE 13772, CSO 7037-N.

(419) RICKETTS, C. R., L. LORENZ, AND W. D'A. MAYCOCK. 1950. MOLECULAR COMPOSITION OF DEXTRAN SOLUTIONS FOR INTRAVENOUS USE. NATURE (LONDON) 165:770-771.

(420) ROGOVIN, S. P., F. R. SENTI, R. G. BENEDICT, AND OTHERS. 1960. CLINICAL-SIZE DEXTRAN BY DIRECT FERMENTATION (WITH NRRL B-1351 STREPTOCOCCUS SP.). J. BIOCHEM. MICROBIOL. TECHNOL. ENG. 2:381-399.

(421) RUNGE, W. F., R. S. DALTER, AND H. E. STAVELY. 1953. RELATIVELY HOMOGENEOUS DEXTRAN FRACTIONS FOR PHYSIOLOGICAL EVALUATION [ABSTRACT 864]. FED. PROC. 12(1):262.

(422) SHIGA, T., AND M. SHIMO. 1957. [STUDIES ON ENZYMATIC SYNTHESIS OF DEXTRAN. PART III. HYDROLYSIS AND FRACTIONAL PRECIPITATION OF ENZYMICALLY SYNTHESIZED DEXTRAN] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 31:272-275. ALSO IN CHEM. ABSTR. 1958. 52:12993H.

(423) ------ AND M. SHIMO. 1957. [STUDIES IN ENZYMATIC SYNTHESIS OF DEXTRAN. PART IV. PREPARATION OF CLINICAL DEXTRAN INFUSION SOLUTIONS AND THEIR ANIMAL TESTS] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 31:842-846. ALSO IN CHEM. ABSTR. 1958. 52:12993I.

(424) SOHNS, V. E., S. P. ROGOVIN, H. F. CONWAY, AND C. T. LANGFORD. 1954. PILOT-PLANT PRODUCTION OF CLINICAL-SIZED DEXTRAN BY ACID HYDROLYSIS OF THE ENZYMATICALLY SYNTHESIZED HIGH POLYMER. NORTHERN REGIONAL RESEARCH AND DEVELOPMENT DIVISION, PEORIA, ILLINOIS, AIC 372. 30 PP.

(425) STACEY, M. 1951. DEGRADATION OF DEXTRAN BY ULTRASONIC WAVES. RESEARCH 4:48.

(426) ------ AND F. PAUTARD. 1952. THERMAL DEGRADATION OF DEXTRAN. CHEM. IND. (LONDON) (43):1058-1059.

(427) TRYON, P. F., AND W. L. BLOOM. 1953. HYDRODEXTRAN: PREPARATION AND STUDY ON BLOOD LEVEL AND EXCRETION RATE. PROC. SOC. EXP. BIOL. MED. 84:462-464.

(428) WATSON, P. R., AND I. A. WOLFF. 1955. DEPOLYMERIZATION OF A DEXTRAN WITH SONIC VIBRATIONS OR ULTRAVIOLET LIGHT. J. AM. CHEM. SOC. 77:196.

(429) WOLFF, I. A., P. R. WATSON, J. W. SLOAN, AND C. E. RIST. 1953. CONTROLLED THERMAL DEPOLYMERIZATION OF DEXTRAN. IND. ENG. CHEM. 45:755-759.

(430) ------, C. L. MEHLTRETTER, R. L. MELLIES, AND OTHERS. 1954. PRODUCTION OF CLINICAL-TYPE DEXTRAN. PARTIAL HYDROLYTIC DEPOLYMERIZATION AND FRACTIONATION OF THE DEXTRAN FROM LEUCONOSTOC MESENTEROIDES STRAIN NRRL B-512. IND. ENG. CHEM. 46:370-377.

(431) ------, R. L. MELLIES, R. L. LOHMAR, AND OTHERS. 1954. PRODUCTION OF CLINICAL TYPE DEXTRAN: PARTIAL ACID HYDROLYSIS AND FRACTIONATION FROM L. MESENTEROIDES NRRL B-742 AND S. DEXTRANICUM NRRL B-1254. IND. ENG. CHEM. 46:2605-2610.

(432) ZAKRZEWSKI, K., J. KRYSIAK, K. MURAWSKI, AND OTHERS. 1954. [DEXTRAN HYDROLYZATE, A HOMOLOGOUS SERIES OF POLYSACCHARIDES] (IN POLISH). BULL ACAD. POL. SCI. CL. 2, 2:67-71. ALSO IN CHEM. ABSTR. 1955. 49:4935G.

(433) ZIEF, M., AND J. R. STEVENS. 1952. HYDRODEXTRAN. J. AM. CHEM. SOC. 74:2126-2127.

(434) ------, G. BRUNNER, AND J. METZENDORF. 1956. THE FRACTIONATION OF PARTIALLY HYDROLYZED DEXTRAN. IND. ENG. CHEM. 48:119-121.

SEE ALSO: 127 132 133 285 825 863 911 1152 2497 PATENT SECTIONS XXVIII, XXX AND XXXI

B. Molecular Weight and Molecular Weight Distribution

Methods for analytical fractionation and analysis, and factors that influence them.

(435) ARTURSON, G., AND K. A. GRANATH. 1972. DEXTRANS AS TEST MOLECULES IN STUDIES OF THE FUNCTIONAL ULTRASTRUCTURE OF BIOLOGICAL MEMBRANES. MOLECULAR WEIGHT DISTRIBUTION ANALYSIS BY GEL CHROMATOGRAPHY. CLIN. CHIM. ACTA 37:309-322.

(436) BALDWIN, R. L. 1954. BOUNDARY SPREADING IN SEDIMENTATION VELOCITY EXPERIMENTS. II. THE CORRECTION OF SEDIMENTATION COEFFICIENT DISTRIBUTIONS FOR THE DEPENDENCE OF SEDIMENTATION COEFFICIENT ON CONCENTRATION. J. AM. CHEM. SOC. 76:402-407.

(437) BARRALES-RIENDA, J. M., A. HORTA, AND E. SAIZ. 1974. MOLECULAR WEIGHT DISTRIBUTION OF A CLINIC DEXTRAN. J. MACROMOL. SCI. CHEM. A8(4):715-724.

(438) BASEDOW, A. M., AND K. H. EBERT. 1975. [DETERMINATION OF MOLECULAR WEIGHT DISTRIBUTIONS AND MEAN VALUES OF THE MOLECULAR WEIGHT OF CLINICAL DEXTRAN] (IN GERMAN). INFUSIONSTHERAPIE 2(4):261-265. ALSO IN CHEM. ABSTR. 1976. 84:8902A.

(439) BEKE, G., AND T. GILANYI. 1971. LIGHT SCATTERING IN SOLUTIONS OF MACROMOLECULES. KEM. LOZLEM. 35(2):207-228. ALSO IN CHEM. ABSTR. 1971. 75:49603M.

(440) BERG, H., G. SCHERF, AND H. ZEIDLER. 1960. [PHYSICOCHEMICAL STUDIES ON DEXTRAN. VII. THE ACTION OF ULTRA HIGH FREQUENCY ON DEXTRAN DETERMINED BY LIGHT-SCATTERING MEASUREMENTS AND THE DIMINUTION OF POLAROGRAPHIC MAXIMA] (IN GERMAN). PHARMAZIE 15:377-386. ALSO IN CHEM. ABSTR. 1962. 56:547B.

(441) ------ AND D. TRESSELT. 1961. [PHYSICOCHEMICAL STUDIES ON DEXTRAN. VIII. MOLECULAR WEIGHT DEPENDENCE OF THE POLAROGRAPHIC ADSORPTION EFFECT] (IN GERMAN). PHARMAZIE 16:74-78. ALSO IN CHEM. ABSTR. 1964. 61:11853B.

(442) CHEETHAM, N. W. H., AND D. J. WINZOR. 1970. ESTIMATION OF MOLECULAR WEIGHT DISTRIBUTIONS BY GEL CHROMATOGRAPHY. J. CHROMATOGR. 48:400-405.

(443) CHERNYAK, V. Y. 1964. [DETERMINATION OF MOLECULAR WEIGHT WITH THE ANALYTICAL ULTRACENTRIFUGE] (IN RUSSIAN). BIOFIZIKA 9(2):239-241. ALSO IN CHEM. ABSTR. 1964. 60:16117H.

(444) EBERT, K. H., AND E. ERNST. 1962. [MOLECULAR WEIGHT DISTRIBUTION OF NATIVE DEXTRANS. I. ANALYTICAL AND PREPARATIVE FRACTIONATION BY THE BAKER-WILLIAMS METHOD] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 56:88-103.

(445) ------, M. BROSCHE, AND K. F. ELGERT. 1964. [MOLECULAR WEIGHT DISTRIBUTION OF NATIVE DEXTRANS. II. A RELATION FOR CONVERSION OF BAKER-WILLIAMS FRACTIONATION CURVES TO MOLECULAR WEIGHT DISTRIBUTION FOR MOLECULAR WEIGHTS UP TO 100,000] (IN GERMAN, ENGLISH SUMMARY). MACROMOL. CHEM. 72:191-197.

(446) ------ AND G. RUPPRECHT. 1966. [ON THE MOLECULAR WEIGHT DETERMINATION OF NATIVE DEXTRANS. III. A NEW METHOD FOR DETERMINATION OF NUMBER-AVERAGE VALUES OF MOLECULAR WEIGHT] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 94:153-159.

(447) ------, G. SCHENK, G. RUPPRECHT, AND OTHERS. 1966. [THE MOLECULAR WEIGHTS OF NATIVE DEXTRANS] (IN GERMAN, ENGLISH SUMMARY). MACROMOL. CHEM. 96:206-220.

(448) GLAESER, W., AND H. BERG. 1959. [PHYSICOCHEMICAL STUDIES ON DEXTRAN. VI. THE SEDIMENTATION AND DIFFUSION BEHAVIOR OF DEXTRAN FOLLOWING ULTRAWAVE IRRADIATION] (IN GERMAN). PHARMAZIE 14:380-392. ALSO IN CHEM. ABSTR. 1961. 55:4106D.

(449) GRAHAM, W. D. 1956. VISCOSITY-WEIGHT AVERAGE MOLECULAR WEIGHT RELATIONSHIPS FOR DEXTRANS IN THE HIGHER CLINICAL SIZE RANGE. REPRODUCIBILITY OF THE LIGHT SCATTERING METHOD. CAN. J. TECHNOL. 34:83-87.

(450) ------, O. PATRY, AND E. H. JACKMAN. 1956. INFLUENCE OF METHANOL ON VISCOSITY AND LIGHT SCATTERING PROPERTIES OF DEXTRAN SOLUTIONS. CAN. J. CHEM. 34:445-450.

(451) GRANATH, K. A. 1958. LIQUID-SOLID EXTRACTION FRACTIONATION OF HYDROLYZED DEXTRAN. MAKROMOL. CHEM. 28:1-9.

(452) ------ AND P. FLODIN. 1961. FRACTIONATION OF DEXTRAN BY THE GEL FILTRATION METHOD. MAKROMOL. CHEM. 48:160-171.

(453) ------. 1964. FRACTIONATION OF POLYSACCHARIDES BY GEL FILTRATION. IN A. T. JAMES AND L. J. MORRIS, EDS., NEW BIOCHEMICAL SEPARATIONS, PP. 112-122. D. VAN NOSTRAND CO. LTD., LONDON.

(454) ------. 1964. [FRACTIONATION OF POLYSACCHARIDES BY GEL FILTRATION] (IN GERMAN). ABH. DTSCH. AKAD. WISS. BERLIN KL. MED. (6):91-97. ALSO IN CHEM. ABSTR. 1965. 63:6013G.

(455) ------. 1965. GEL FILTRATION: FRACTIONATION OF DEXTRAN. METHODS CARBOHYDR. CHEM. 5:20-28.

(456) ------ AND B. E. KVIST. 1967. MOLECULAR WEIGHT DISTRIBUTION ANALYSIS BY GEL CHROMATOGRAPHY ON SEPHADEX. J. CHROMATOGR. 28:69-81.

(457) HOLLO, J., E. LASZLO, M. TOTH, AND Z. RATHONYI. 1968. [HETERODISPERSITY OF POLYSACCHARIDES. I. FRACTIONATION OF DEXTRANS WITH SEPHADEX GEL FILTER] (IN GERMAN). PERIOD. POLYTECH. CHEM. ENG. 12(1):69-85. ALSO IN CHEM. ABSTR. 1969. 70:12810X.

(458) ------, E. LASZLO, M. TOTH. 1968. [HETERODISPERSITY OF POLYSACCHARIDES. III. STUDIES ON THE HETERODISPERSITY OF DEXTRANS BY TURBIDIMETRIC TITRATION] (IN GERMAN, ENGLISH SUMMARY). STAERKE 20:366-373. ALSO IN CHEM. ABSTR. 1969. 70:48861D.

(459) ISBELL, H. S. 1951. DETERMINATION OF CARBONYL GROUPS BY REACTION WITH RADIOACTIVE CYANIDE, AND A SIMPLE MEANS FOR ESTIMATION OF MOLECULAR WEIGHT IN POLYSACCHARIDES. SCIENCE 113:532-533.

(460) ------, C. F. SNYDER, N. B. HOLT, AND M. R. DRYDEN. 1953. DETERMINATION OF MOLECULAR WEIGHTS OF DEXTRANS BY MEANS OF ALKALINE COPPER REAGENTS. J. RES. NAT. BUR. STAND. 50:81-86.

(461) JENNER, H. 1967. AUTOMATED DETERMINATION OF THE MOLECULAR WEIGHT DISTRIBUTION OF DEXTRAN. IN E. KAWERAN, AUTOMATION IN ANALYTICAL CHEMISTRY, TECHNICON SYMPOSIA, VOL. 2, PP. 205-207. MEDIAD INC., WHITE PLAINS, NEW YORK.

(462) KICIAK, M. W. 1975. DETERMINATION OF THE MEAN MOLECULAR WEIGHT OF DEXTRAN BY A POLAROGRAPHIC-VISCOSIMETRIC METHOD. CHEM. ANAL. 20(3):453-464. ALSO IN CHEM. ABSTR. 1976. 84:6821Z.

(463) LACKO, L., AND J. MALEK. 1957. [DEXTRAN. II. DETERMINATION OF THE NUMBER AVERAGE MOLECULAR WEIGHT OF PARTIALLY DEGRADED DEXTRAN BY AN IODOMETRIC METHOD] (IN GERMAN). (FOR DEXTRAN. I. SEE B. SEDLACEK, 1954.) CHEM. LISTY 51:47-50. REPRINTED IN COLLECT. CZECH. CHEM. COMMUN. 22(4): 1106-1109. ALSO IN CHEM. ABSTR. 1957. 51:11940F.

(464) LAURENT, T. C., AND K. A. GRANATH. 1967. FRACTIONATION OF DEXTRAN AND FICOLL BY CHROMATOGRAPHY ON SEPHADEX G-200. BIOCHIM. BIOPHYS. ACTA. 136:191-198.

(465) MASTRANGELO, S. V. R., B. CLAY, M. M. FISHMAN, AND OTHERS. 1955. METHOD FOR EVALUATING THE RELIABILITY OF ROUTINE MOLECULAR WEIGHT DETERMINED BY LIGHT SCATTERING. ANAL. CHEM. 27:262-265.

(466) MAY, Z., AND K. ZAKRZEWSKI. 1958. ELECTROPHORETIC ANALYSIS OF CLINICAL DEXTRAN. EXPERIENTIA 14:35-36.

(467) METCALF, W., L. M. ROUSSELOT, F. E. GILBERTSON, AND J. M. HARMON. 1954. A CLINICAL METHOD FOR THE DETERMINATION OF THE MOLECULAR WEIGHTS AND THE MOLECULAR WEIGHT DISTRIBUTIONS OF PLASMA EXPANDERS. SURG. FORUM 4:719-724.

(468) OGSTON, A. G., AND E. F. WOODS. 1954. THE SEDIMENTATION OF SOME FRACTIONS OF DEGRADED DEXTRAN. TRANS. FARADAY SOC. 50:635-643.

(469) RIDDICK, J. A., E. E. TOOPS, JR., R. L. WIEMAN, AND R. L. CUNDIFF. 1954. PHYSIOCHEMICAL CHARACTERIZATION OF CLINICAL DEXTRAN. ANAL. CHEM. 26:1149-1155.

(470) SATO, T. 1956. [DETERMINATION OF MOLECULAR WEIGHT OF DEXTRANS BY LIGHT SCATTERING METHOD] (IN JAPANESE). KOBUNSHI KAGAKU 13:526-530. ALSO IN CHEM. ABSTR. 1957. 18487E.

(471) SCHERF, G., AND H. BERG. 1958. [PHYSIOCHEMICAL STUDIES ON DEXTRAN. V. MOLECULAR WEIGHT DETERMINATION OF DEXTRAN BY LIGHT-SCATTERING MEASUREMENTS WITH A VISUAL PHOTOMETER] (IN GERMAN). (FOR PART IV, SEE H. ZEIDLER AND H. BERG.) PHARMAZIE 13:336-344. ALSO IN CHEM. ABSTR. 1959. 53:1892D.

(472) SEDLACEK, B. 1954. [LIGHT SCATTERING BY DEXTRAN SOLUTIONS] (IN GERMAN). CHEM. LISTY 48:1291-1296. REPRINTED IN COLLECT. CZECH. CHEM. COMMUN. 1955. 20:278-284. ALSO IN CHEM. ABSTR. 1955. 49:726B.

(473) ------. 1955. [TURBIDIMETRIC CONTROL OF MACROMOLECULAR FRACTIONS] (IN GERMAN). CHEM. LISTY 49:453-459. ALSO IN CHEM. ABSTR. 1955. 49:10010B.

(474) ------ AND I. FRIC. 1958. [DEXTRAN VII. VALUES OF THE INTERACTION CONSTANT OF DEXTRAN DETERMINED BY MEANS OF THE LIGHT SCATTERING METHOD] (IN GERMAN). (FOR DEXTRAN VI, SEE L. LACKO AND J. MALEK.) CHEM. LISTY. 1958. 52:2000-2003. REPRINTED IN COLLECT. CZECH. CHEM. COMMUN. 1959. 24:2834-2838. ALSO IN CHEM. ABSTR. 1959. 53:6737C.

(475) SEELY, T. 1967. HYDRODYNAMICS OF A POROUS SPHERE MOLECULE. J. POLYMER SCI. PART A-1, 5:3029-3041.

(476) SENTI, F. R., N. N. HELLMAN, N. H. LUDWIG, AND OTHERS. 1955. VISCOSITY, SEDIMENTATION, AND LIGHT-SCATTERING PROPERTIES OF FRACTIONS OF AN ACID-HYDROLYZED DEXTRAN. J. POLYMER SCI. 17:527-546.

(477) SPONAR, J., AND C. LOSTICKY. 1957. [DEXTRAN. V. THE SHAPE AND SIZE OF MOLECULES OF SEVERAL DEXTRAN FRACTIONS] (IN GERMAN). (FOR DEXTRAN. IV, SEE L. LACKO AND J. MALEK.) CHEM. LISTY 51:1641-1648. REPRINTED IN COLLECT. CZECH. CHEM. COMMUN. 1958. 23(5):818-827. ALSO IN CHEM. ABSTR. 1958. 52:42B.

(478) TAKANO, M., AND T. SATO. 1960. [DETERMINATION OF THE MOLECULAR WEIGHT OF DEXTRANS BY A LIGHT-SCATTERING METHOD. II.] (IN JAPANESE). KOBUNSHI KAGAKU 17:445-448. ALSO IN CHEM. ABSTR. 1961. 55:27495C.

(479) TLACH, K-F., W. KAYSER, AND C. KUHNE. 1961. [PHYSICOCHEMICAL STUDIES ON DEXTRAN. IX. CALCULATION OF MOLECULAR WEIGHT DISTRIBUTION OF DEXTRAN FROM SEDIMENTATION AND DIFFUSION MEASUREMENTS] (IN GERMAN). PHARMAZIE 16:311-318.

(480) WAKSMUNDZKI, A., AND K. ZAGORSKI. 1958. [DETERMINATION OF THE DEGREE OF POLYMERIZATION OF PHARMACEUTICAL DEXTRAN BY COLORIMETRIC DETERMINATION OF END RADICALS] (IN POLISH, ENGLISH SUMMARY). PRZEM. CHEM. 37:48-51. ALSO IN CHEM. ABSTR. 1958. 52:12319H.

(481) WALES, M., P. A. MARSHALL, AND S. G. WEISSBERG. 1953. INTRINSIC VISCOSITY-MOLECULAR WEIGHT RELATIONSHIPS FOR DEXTRAN. J. POLYMER SCI. 10:229-240.

(482) WAN, P. J., AND E. T. ADAMS, JR. 1974. MOLECULAR-WEIGHT DISTRIBUTION FROM SEDIMENTATION EQUILIBRIUM EXPERIMENTS. II. DEXTRAN T-70. POLYM. PREPR. AM. CHEM. SOC. DIV. POLYM. CHEM. 15:509-514.

(483) WILLIAMS, J. W., AND W. M. SAUNDERS. 1954. SIZE DISTRIBUTION ANALYSIS IN PLASMA EXTENDER SYSTEMS. II. DEXTRAN. J. PHYS. CHEM. 58:854-859.

(484) ZEBEC, M., G. DEZELIC, J. DRATOHVIL, AND K. F. SCHULZ. 1958. REFRACTIVE INDEX INCREMENT OF DEXTRAN FOR THE MOLECULAR-WEIGHT DETERMINATION BY LIGHT SCATTERING. CROAT. CHEM. ACTA 30:251-255. ALSO IN CHEM. ABSTR. 1960. 54:1025I.

(485) ------, N. DEZELIC, G. DEZELIC, AND J. DRATOHVIL. 1971. MOLECULAR-WEIGHT DISTRIBUTION OF CLINICAL SAMPLES OF DEXTRAN. ACTA PHARM. JUGOSL. 21(2):59-70. ALSO IN CHEM. ABSTR. 1971. 75:132956Z.

(486) ZEIDLER, H., AND H. BERG. 1958. [PHYSICOCHEMICAL STUDIES ON DEXTRAN. IV. TURBIDITY TITRATION OF DEXTRAN SOLUTIONS] (IN GERMAN). PHARMAZIE 13:72-77. ALSO IN CHEM. ABSTR. 1959. 53:1892C.

SEE ALSO: 887 892 942 943 998 THROUGH 1008

C. Other Procedures for Analytical and Preparative Fractionation and for Analysis

(487) BAKER, R. W. 1969. METHODS OF FRACTIONATING POLYMERS BY ULTRAFILTRATION. J. APPL. POLYM. SCI. 13:369-376.

(488) BARKER, S. A., B. W. HATT, J. B. MARSTERS, AND P. J. SOMERS. 1969. FRACTIONATION OF DEXTRAN AND HYALURONIC ACID ON POROUS SILICA BEADS. CARBOHYDR. RES. 9:373-379.

(489) ------, B. W. HATT, AND P. J. SOMERS. 1969. AUTOMATED, CONTINUOUS ANALYSIS FOR CONCENTRATION OF TOTAL CARBOHYDRATE AND REDUCING END-GROUP IN THE FRACTIONATION OF DEXTRAN ON POROUS SILICA BEADS. CARBOHYDR. RES. 11:355-362.

(490) BATHGATE, G. N. 1970. AN AUTOMATED GEL FILTRATION SYSTEM FOR DETERMINING THE MOLECULAR WEIGHT OF POLYSACCHARIDES. J. CHROMATOGR. 47:92-96.

(491) BOMBAUGH, K. J., W. A. DARK, AND R. N. KING. 1968. GEL PERMEATION CHROMOTOGRAPHY: NEW APPLICATIONS AND TECHNIQUES. J. POLYM. SCI. PART C, 21:131-142.

(492) ------, W. A. DARK, AND J. N. LITTLE. 1969. FRACTIONATION OF POLYVINYL ALCOHOL ON DEACTIVATED POROUS SILICA BEADS BY GEL PERMEATION CHROMATOGRAPHY. ANAL. CHEM. 41:1337-1339.

(493) DINTZIS, F. R., AND R. TOBIN. 1974. MOLECULAR-SIEVE CHROMATOGRAPHY OF AMYLOSE AND DEXTRAN OVER POROUS GLASS. J. CHROMATOGR. 88:77-85.

(494) HALLER, W. 1968. CORRELATION BETWEEN CHROMATOGRAPHIC AND DIFFUSIONAL BEHAVIOUR OF SUBSTANCES IN BEDS OF PORE CONTROLLED GLASS. CONTRIBUTION TO THE MECHANISM OF STERIC CHROMATOGRAPHY. J. CHROMATOGR. 32:676-684.

(495) HUMMEL, B. C. W., AND D. C. SMITH. 1962. GEL DIFFUSION CHROMATOGRAPHY OF DEXTRAN. J. CHROMATOGR. 8:491-500.

(496) LE PAGE, M., R. BEAU, AND A. J. DE VRIES. 1968. EVALUATION OF ANALYTICAL GEL PERMEATION CHROMATOGRAPHY COLUMNS PACKED WITH POROUS SILICA BEADS. J. POLYM. SCI. PART C, 21:119-130.

(497) WILKIE, K. C. B., J. K. N. JONES, B. J. EXCELL, AND R. E. SEMPLE. 1957. THE FRACTIONATION OF POLYSACCHARIDES BY THE METHOD OF ULTRAFILTRATION. CAN. J. CHEM. 35:795-798.

SEE ALSO: 964 1290

VI. α-1,6-Glucans: stereospecific chemical synthesis and comparison with bacterial dextrans

(498) KLEMER, A., AND CH. APOSTOLIDES. 1972. [A NEW SYNTHESIS OF (1,6)-2,3,4,-TRI-O-METHYL-ALPHA-D-GLUCAN] (IN GERMAN). CARBOHYDR. RES. 22:432-435.

(499) REESE, E. T., AND F. W. PARRISH. 1966. A COMPARISON OF SYNTHETIC DEXTRAN WITH A NATURAL PRODUCT BY ENZYMIC METHODS. BIOPOLYMERS 4:1043-1045.

(500) RUCKEL, E. R., AND C. SCHUERCH. 1966. CHEMICAL SYNTHESIS OF A STEREO-REGULAR LINEAR POLYSACCHARIDE. J. AM. CHEM. SOC. 88:2605-2606.

(501) ------ AND C. SCHUERCH. 1966. PREPARATION OF HIGH POLYMERS FROM 1,6-ANHYDRO-2,3,4-TRI-O-SUBSTITUTED BETA-D-GLUCOPYRANOSE. J. ORG. CHEM. 31:2233-2239.

(502) ------ AND C. SCHUERCH. 1967. CHEMICAL SYNTHESIS OF A DEXTRAN MODEL, POLY-ALPHA-(1,6)-ANHYDRO-D-GLUCOPYRANOSE. BIOPOLYMERS 5:515-523.

SEE ALSO: 1373 1636 1696 1766

VII. Structural analysis of dextrans

A. Methods for Structural Analysis

Chemical and physicochemical methods and the evaluation.

(503) ABDEL-AKHER, M., J. K. HAMILTON, R. MONTGOMERY, AND F. SMITH. 1952. A NEW PROCEDURE FOR THE DETERMINATION OF THE FINE STRUCTURE OF POLYSACCHARIDES. J. AM. CHEM. SOC. 74:4970-4971.

(504) DIMLER, R. J., I. A. WOLFF, J. W. SLOAN, AND C. E. RIST. 1955. INTERPRETATION OF PERIODATE OXIDATION DATA ON DEGRADED DEXTRAN. J. AM. CHEM. SOC. 77:6568-6573.

(505) ------, R. W. JONES, W. C. SCHAEFER, AND J. W. VAN CLEVE. 1956. VARIATION IN STRUCTURE AMONG SELECTED DEXTRANS AS INDICATED BY HYDROLYSIS AND METHYLATION TECHNIQUES [ABSTRACT 4]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 129:2D.

(506) HOLLO, J., E. LASZLO, AND A. HOSCHKE. 1968. HETERODISPERSITY OF POLYSACCHARIDES. II. DETERMINATION, BY TRITYLATION, OF THE HETERODISPERSITY OF D-GLUCOSIDIC BONDS IN DEXTRANS . PERIOD. POLYTECH. CHEM. ENG. 12(3):277-282. ALSO IN CHEM. ABSTR. 1969. 71:3601Y.

(507) HOUGH, L., AND M. B. PERRY. 1956. AN AID TO STRUCTURAL EVALUATION IN THE OLIGO- AND POLY-SACCHARIDE GROUP. CHEM. IND. (LONDON) (29):768-769.

(508) ISBELL, H. S., H. L. FRUSH, AND J. D. MOYER. 1957. USE OF CARBON-14 AND TRITIUM FOR THE STUDY AND CHARACTERIZATION OF CELLULOSE AND OTHER POLYSACCHARIDES. TAPPI 40:739-743.

(509) ------, H. L. FRUSH, B. H. BRUCKNER, AND OTHERS. 1957. MICROMETHYLATION OF POLYSACCHARIDES. ANAL. CHEM. 29:1523-1528.

(510) JEANES, A., AND C. A. WILHAM. 1950. PERIODATE OXIDATION OF DEXTRAN. J. AM. CHEM. SOC. 72:2655-2657.

(511) KENT, P. W. 1949. PERIODATE OXIDATION IN THE STUDY OF THE STRUCTURE OF DEXTRANS. SCIENCE 110:689-690.

(512) KIRCHER, H. W. 1960. GAS-LIQUID PARTITION CHROMATOGRAPHY OF METHYLATED SUGARS. ANAL. CHEM. 32:1103-1106.

(513) LEONARD, G. J., AND G. N. RICHARDS. 1975. UNCERTAINTIES IN THE USE OF PERIODATE OXIDATION FOR DETERMINATION OF DEXTRAN STRUCTURE. CARBOHYDR. RES. 41:143-152.

(514) LINDBERG, B., J. LOENNGREN, AND S. SVENSSON. 1975. SPECIFIC DEGRADATION OF POLYSACCHARIDES. ADV. CARBOHYDR. CHEM. BIOCHEM. 31:185-240.

(515) LOHMAR, R. L. 1952. EVIDENCE OF NEW LINKAGES IN DEXTRANS. J. AM. CHEM. SOC. 74:4974.

(516) MOYER, J. D., AND H. S. ISBELL. 1957. STRUCTURAL ANALYSIS OF CLINICAL DEXTRANS BY PERIODATE OXIDATION AND ISOTOPE DILUTION TECHNIQUES. ANAL. CHEM. 29:1862-1893.

(517) NANASI, P., AND A. LIPTAK. 1973. STUDIES OF POLYSACCHARIDE STRUCTURE PART I. A MODIFICATION OF THE SMITH DEGRADATION. CARBOHYDR. RES. 29:193-199.

(518) NEUMUELLER, G., AND E. VASSEUR. 1953. THE INFLUENCE OF PH ON THE PERIODATE OXIDATION OF CARBOHYDRATES. ARK. KEMI 5:235-245.

(519) OVODOV, Y. S., A. K. DZIZENKO. 1968. [STRUCTURAL STUDIES OF SOME OLIGO- AND POLYSACCHARIDES BY N.M.R. SPECTROSCOPY] (IN RUSSIAN). DOKL. AKAD. NAUK SSSR 178(6):1338-1341. ALSO IN CHEM. ABSTR. 1968. 69:44141A.

(520) RANKIN, J. C., AND A. JEANES. 1954. EVALUATION OF THE PERIODATE OXIDATION METHOD FOR STRUCTURAL ANALYSIS OF DEXTRANS. J. AM. CHEM. SOC. 76:4435-4441.

(521) REES, D. A., N. G. RICHARDSON, N. J. WIGHT, AND SIR E. HIRST. 1969. CHARACTERISATION OF POLYSACCHARIDE STRUCTURES BY GLYCOSIDE STABILISATION WITH TOLUENE-PARA-SULPHONATES: MODEL EXPERIMENTS WITH DEXTRAN. CARBOHYDR. RES. 9:451-462.

(522) REEVES, R. E. 1944. THE OPTICAL ACTIVITY OF THE COPPER COMPLEXES OF POLYSACCHARIDES AND SUBSTITUTED METHYL GLUCOSIDES. J. BIOL. CHEM. 154:49-55.

(523) SCOTT, J. E., AND R. J. HARBINSON. 1968. PERIODATE OXIDATION OF ACID POLYSACCHARIDES. INHIBITION BY THE ELECTROSTATIC FIELD OF THE SUBSTRATE. HISTOCHEMIE 14:215-220.

(524) SCOTT, T. A., JR., N. N. HELLMAN, AND F. R. SENTI. 1957. CHARACTERIZATION OF DEXTRANS BY THE OPTICAL ROTATION OF THEIR CUPRAMMONIUM COMPLEXES. J. AM. CHEM. SOC. 79:1178-1182.

(525) SLOAN, J. W., B. H. ALEXANDER, R. L. LOHMAR, AND OTHERS. 1954. DETERMINATION OF DEXTRAN STRUCTURE BY PERIODATE OXIDATION TECHNIQUES. J. AM. CHEM. SOC. 76:4429-4434.

(526) SUZUKI, H., AND E. J. HEHRE. 1964. THE DIFFERENTIATION OF SEROTYPE A AND B DEXTRANS BY MEANS OF PARTIAL ACETOLYSIS. ARCH. BIOCHEM. BIOPHYS. 104:305-313.

(527) USUI, T., M. KOBAYASHI, N. YAMAOKA, AND OTHERS. 1973. STRUCTURAL DETERMINATION OF WATER-SOLUBLE DEXTRAN BY C-13 AND PROTON NMR SPECTROSCOPY. TETRAHEDRON LETT. 36:3397-3400.

(528) ------, M. YOKOYAMA, N. YAMAOKA, AND OTHERS. 1974. PROTON MAGNETIC RESONANCE SPECTRA OF D-GLUCO-OLIGOSACCHARIDES AND D-GLUCANS. CARBOHYDR. RES. 33:105-116.

SEE ALSO: 576 585 786 1155 1637

B. Structure of Dextrans by Chemical and Physicochemical Methods

Includes clinical and cariogenic dextrans, and mutans.

(529) ABBOTT, D., AND H. WEIGEL. 1965. STUDIES ON DEXTRANS AND DEXTRANASES. PART V. SYNTHESIS OF THE THREE CARBOXYLIC ACIDS DERIVED FROM METHYL BETA-MALTOSIDE. (FOR PART 4, SEE D. H. HUTSON AND H. WEIGEL, SECTION VII C.) J. CHEM. SOC. 5157-5162.

(530) ------ AND H. WEIGEL. 1966. STUDIES ON DEXTRANS AND DEXTRANASES. PART VI. TYPE AND DEGREE OF BRANCHING IN TWO DEXTRANS. J. CHEM. SOC. C. 816-820.

(531) ------, E. J. BOURNE, AND H. WEIGEL. 1966. STUDIES ON DEXTRANS AND DEXTRANASES. PART VIII. SIZE AND DISTRIBUTION OF BRANCHES IN SOME DEXTRANS. J. CHEM. SOC. C, 827-831.

(532) ARNETT, A. T., AND R. M. MAYER. 1975. STRUCTURAL CHARACTERISTICS OF NATIVE AND ENZYMICALLY FORMED DEXTRAN OF S. SANGUIS ATCC 10558. CARBOHYDR. RES. 42:339-345.

(533) BAILEY, R. W. 1959. TRANSGLUCOSIDASE ACTIVITY OF RUMEN STRAINS OF STREPTOCOCCUS BOVIS: STRUCTURE OF THE DEXTRAN PRODUCED FROM SUCROSE. BIOCHEM. J. 71:23-26.

(534) BAIRD, J. K., AND D. C. ELLWOOD. 1972. INVESTIGATION OF THE POLYSACCHARIDE PRODUCED BY EXTRACELLULAR GLYCOSYLTRANSFERASES FROM STREPTOCOCCUS MUTANS. BIOCHEM. J. 127:88P-89P.

(535) BARKER, S. A., F. PAUTARD, I. R. SIDDIQUI, AND M. STACEY. 1955. THE STRUCTURE OF POLYSACCHARIDE SYNTHESIZED BY A STREPTOCOCCUS ISOLATED FROM A "ROPY FERMENTATION." THE VALUE OF INFRARED SPECTROSCOPY IN POLYSACCHARIDE STUDIES. CHEM. IND. (LONDON) (45):1450-1451.

(536) ------, E. J. BOURNE, AND G. T. BRUCE, AND OTHERS. 1954. IMMUNOPOLYSACCHARIDES. PART II. STRUCTURE OF A BETACOCCUS ARABINOSACEOUS DEXTRAN. J. CHEM. SOC. 2395-2399. ALSO IN CHEM. IND. (LONDON). 1952. (47):1156.

(537) ------, E. J. BOURNE, A. E. JAMES, AND OTHERS. 1955. IMMUNOPOLYSACCHARIDES, PART V, STRUCTURE OF A MODIFIED BETACOCCUS ARABINOSACEOUS DEXTRAN. J. CHEM. SOC. 2096-2099.

(538) ------, E. J. BOURNE, G. T. BRUCE, AND M. STACEY. 1958. IMMUNOPOLYSACCHARIDES. PART XI. STRUCTURE OF AN ACETOBACTER CAPSULATUM DEXTRAN. J. CHEM. SOC. 4414-4416.

(539) BOURNE, E. J., R. L. SIDEBOTHAM, AND H. WEIGEL. 1972. STUDIES ON DEXTRANS AND DEXTRANASES PART X. TYPES AND PERCENTAGES OF SECONDARY LINKAGES IN THE DEXTRANS ELABORATED BY LEUCONOSTOC MESENTEROIDES NRRL B-1299. (FOR PART IX, SEE R. L. SIDEBOTHAM, H. WEIGEL, AND W. H. BOWEN, SECTION VII B.) CARBOHYDR. RES. 22:13-22.

(540) ------, R. L. SIDEBOTHAM, AND H. WEIGEL. 1974. STUDIES ON DEXTRANS AND DEXTRANASES PART XI. THE STRUCTURE OF A DEXTRAN ELABORATED BY LEUCONOSTOC MESENTEROIDES NRRL B-1299. CARBOHYDR. RES. 34:279-288.

(541) BRAUNS, F. E. 1938. THE STRUCTURE OF DEXTRAN: NOTE ON "THE STRUCTURE OF DEXTRAN SYNTHESIZED BY THE ACTION OF LEUCONOSTOC MESENTEROIDES ON SUCROSE" BY F. L. FOWLER, I. K. BUCKLAND, F. BRAUNS, AND H. HIBBERT. CAN. J. RES. 16B:73-75.

(542) BROSSARD, L. C. 1968. [STRUCTURE OF CUBAN DEXTRAN] (IN SPANISH). SOBRE DERIV. CANA AZUCAR 2(1):41-47. ALSO IN CHEM. ABSTR. 1968. 69:68444C.

(543) CERNY, M., AND J. STANEK. 1959. [THE STRUCTURE OF DEXTRANS] (IN GERMAN). MONATSH. CHEM. 90(2):157-170.

(544) CESKA, M., K. A. GRANATH, B. NORRMAN, AND B. GUGGENHEIM. 1972. STRUCTURAL AND ENZYMATIC STUDIES ON GLUCANS SYNTHESIZED WITH GLUCOSYLTRANSFERASES OF SOME STRAINS OF ORAL STREPTOCOCCI. ACTA CHEM. SCAND. 26:2223-2230.

(545) COVACEVICH, M. T., AND G. N. RICHARDS. 1974. THE DETERMINATION OF THE STRUCTURE OF "DEXTRANS" ISOLATED FROM CANE SUGAR. PROC. QUEENSL. SOC. SUGAR CANE TECHNOL. 41:171-177.

(546) EBISU, S., A. MISAKI, K. KATO, AND S. KOTANI. 1974. THE STRUCTURE OF WATER-INSOLUBLE GLUCANS OF CARIOGENIC STREPTOCOCCUS MUTANS, FORMED IN THE ABSENCE AND PRESENCE OF DEXTRANASE. CARBOHYDR. RES. 38:374-381.

(547) FAIRHEAD, E. C., M. J. HUNTER, AND H. HIBBERT. 1938. THE STRUCTURE OF DEXTRAN SYNTHESIZED BY LEUCONOSTOC DEXTRANICUS. CAN. J. RES. 16B:151.

(548) FOWLER, F. L., I. K. BUCKLAND, F. E. BRAUNS, AND H. HIBBERT. 1937. STRUCTURE OF THE DEXTRAN SYNTHESIZED BY THE ACTION OF LEUCONOSTOC MESENTEROIDES ON SUCROSE. CAN. J. RES. 15B:486-497.

(549) FRANK, H. P., AND H. MARK. 1954. [THE STRUCTURE OF DEXTRANS] (A REVIEW, IN GERMAN). MONATSH. CHEM. 85:307-317.

(550) GOLDSTEIN, I. J., AND W. J. WHELAN. 1962. STRUCTURAL STUDIES OF DEXTRANS. PART I. A DEXTRAN CONTAINING ALPHA-1,3-GLUCOSIDIC LINKAGES. (FOR PART II, SEE M. ABDULLAH, I. J. GOLDSTEIN, AND W. J. WHELAN, SECTION VIII I.) J. CHEM. SOC. 170-175.

(551) HASSID, W. Z., AND S. A. BARKER. 1940. STRUCTURE OF DEXTRAN SYNTHESIZED FROM SUCROSE BY BETACOCCUS ARABINOSACEOUS, ORLA-JENSEN. J. BIOL. CHEM. 134:163-170.

(552) HORISBERGER, M. 1969. STRUCTURE OF THE DEXTRAN OF THE TIBI GRAIN. CARBOHYDR. RES. 10:379-385.

(553) JEANES, A. 1958. [STRUCTURE OF DEXTRANS AND METHODS OF STRUCTURAL ANALYSIS (SUBJECT NOT TITLE IN A GROUP INTERCHANGE ON HOMOPOLYSACCHARIDES.)]. IN POLYSACCHARIDES IN BIOLOGY, TRANS. THIRD CONF., MAY 28-31, 1957, PRINCETON, N.J., PP. 130-147. SPONSORED BY THE JOSIAH MACY, JR., FOUNDATION, NEW YORK.

(554) JONES, J. K. N., AND K. C. B. WILKIE. 1959. STRUCTURAL STUDIES ON CLINICAL DEXTRANS. PART I. METHYLATION AND PERIODATE OXIDATION STUDIES. CAN. J. BIOCHEM. PHYSIOL. 37:377-390.

(555) JONES, R. W., R. J. DIMLER, A. JEANES, AND OTHERS. 1954. EXTERNAL-BRANCH LENGTH IN NRRL B-512 DEXTRAN MOLECULES [ABSTRACT 33]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 126:13D.

(556) KOBAYASHI, M., K. SHISHIDO, T. KIRUCHI, AND K. MATSUDA. 1973. THE STRUCTURE OF DEXTRAN ELABORATED BY LEUCONOSTOC MESENTEROIDES NRRL B-1299. PART I. FRACTIONATION OF THE LEUCONOSTOC MESENTEROIDES NRRL B-1299 DEXTRAN AND PRELIMINARY CHARACTERIZATION OF THE FRACTIONS. AGRIC. BIOL. CHEM. 37:357-365.

(557) ------, K. SHISHIDO, T. KIKUCHI, AND K. MATSUDA. 1973. THE STRUCTURE OF THE DEXTRAN ELABORATED BY LEUCONOSTOC MESENTEROIDES NRRL B-1299. PART II. METHYLATION ANALYSIS OF FRACTIONS FROM THE LEUCONOSTOC MESENTEROIDES NRRL B-1299 DEXTRAN. AGRIC. BIOL. CHEM. 37(12):2763-2769.

(558) KOBAYASHI, T., AND Y. TSUKANO. 1953. [STUDIES ON DEXTRAN. PART 3. PERIODATE OXIDATION OF DEXTRAN] IN JAPANESE, ENGLISH SUBTITLE AND SUMMARY). (FOR PARTS 1 AND 2, SEE SECTION X B AND X C.) NIPPON NOGEI KAGAKU KAISHI 27:33-37. ALSO IN CHEM. ABSTR. 1954. 48:12194F.

(559) LARM, O., B. LINDBERG, AND S. SVENSSON. 1971. STUDIES ON THE LENGTH OF THE SIDE CHAINS OF THE DEXTRAN ELABORATED BY LEUCONOSTOC MESENTEROIDES NRRL B-512. CARBOHYDR. RES. 20:39-48.

(560) LEVI, I., W. L. HAWKINS, AND H. HIBBERT. 1942. STUDIES ON REACTIONS RELATING TO CARBOHYDRATES AND POLYSCCHARIDES. LXVI. STRUCTURE OF THE DEXTRAN SYNTHESIZED BY THE ACTION OF LEUCONOSTOC MESENTEROIDES ON SUCROSE. J. AM. CHEM. SOC. 64:1959-1962.

(561) LEWICKI, W. J., L. W. LAWRENCE, AND J. R. EDWARDS. 1971. DETERMINATION OF THE STRUCTURE OF A BROTH DEXTRAN PRODUCED BY A CARIOGENIC STREPTOCOCCUS. CARBOHYDR. RES. 17:175-182.

(562) LEWIS, B. A., M. J. ST. CYR, AND F. SMITH. 1967. THE CONSTITUTION OF THE FRUCTAN PRODUCED BY LEUCONOSTOC MESENTEROIDES STRAIN C. (STRAIN ALSO DESIGNATED NRRL B-1298.) CARBOHYDR. RES. 5:194-201.

(563) ------, M. J. ST. CYR, AND F. SMITH. 1968. THE STRUCTURE OF LEUCONOSTOC MESENTEROIDES STRAIN C DEXTRAN. I. METHYLATION ANALYSIS. (STRAIN ALSO DESIGNATED NRRL B-1298.) J. ORG. CHEM. 33:3136-3139.

(564) ------, M. J. ST. CYR, AND F. SMITH. THE STRUCTURE OF LEUCONOSTOC MESENTEROIDES STRAIN C DEXTRAN. II. FRAGMENTATION ANALYSIS. (STRAIN ALSO DESIGNATED NRRL B-1298.) J. ORG. CHEM. 33:3139-3144.

(565) LINDBERG, B., AND S. SVENSSON. 1968. STRUCTURAL STUDIES ON DEXTRAN FROM LEUCONOSTOC MESENTEROIDES NRRL B-512. ACTA CHEM. SCAND. 22:1907-1912.

(566) LONG, L. W., AND J. R. EDWARDS. 1972. DETAILED STRUCTURE OF A DEXTRAN FROM A CARIOGENIC BACTERIUM. CARBOHYDR. RES. 24:216-217.

(567) MISAKI, A., AND S. KANAMARU. 1968. APPLICATION OF SMITH DEGRADATION TO STRUCTURAL STUDIES OF A DEXTRAN. AGRIC. BIOL. CHEM. 32:432-440.

(568) MIYAJI, H., A. MISAKI, AND M. TORII. 1973. THE STRUCTURE OF A DEXTRAN PRODUCED BY LEUCONOSTOC MESENTEROIDES NRRL B-1397: THE LINKAGES AND LENGTH OF THE BRANCHES. CARBOHYDR. RES. 31:277-287.

(569) PASIKA, W. M., AND L. H. CRAGG. 1963. THE DETECTION AND ESTIMATION OF BRANCHING IN DEXTRAN BY PROTON MAGNETIC RESONANCE SPECTROSCOPY. CAN. J. CHEM. 41:293-299.

(570) ------ AND L. H. CRAGG. 1963. PROTON MAGNETIC RESONANCE SPECTROSCOPY AND THE SULPHATION OF LINEAR AND BRANCHED DEXTRAN. CAN. J. CHEM. 41:777-782.

(571) ------ AND L. H. CRAGG. 1965. SEMIQUANTITATIVE ASPECT OF SHORT BRANCH DETECTION BY USING POLYELECTROLYTE EXPANSION EFFECT. J. POLYM. SCI. PART A, 3:2527-2533.

(572) PAVLOVIC, V., AND P. TRPINAC. 1962. DETERMINATION OF THE ALPHA-1,6 BOND PERCENTAGE IN DEXTRAN PVDT BY THE PERIODATE OXIDATION METHOD. ARHIV FARM. 12:221-223. ALSO IN CHEM. ABSTR. 1963. 58:8852B.

(573) PEAT, S., E. SCHLUECHTERER, AND M. STACEY. 1939. POLYSACCHARIDES. PART XXIX. CONSTITUTION OF THE DEXTRAN PRODUCED FROM SUCROSE BY LEUCONOSTOC MESENTEROIDES (BETACOCCUS ARABINOSACEOUS HAEMOLYTICUS). J. CHEM. SOC. 581-585.

(574) SAKAKIBARA, K., M. TORII, A. MISAKI, AND H. MIYAJI. 1972. ACETOLYSIS OF DEXTRAN NRRL B-1397. PREPARATION OF TRISACCHARIDES CONTAINING (1,2)- AND (1,6)-ALPHA-D-GLUCOSE LINKAGES. CARBOHYDR. RES. 25:443-451.

(575) SEYMOUR, F. R., R. D. KNAPP, AND S. H. BISHOP. 1976. DETERMINATION OF THE STRUCTURE OF DEXTRAN BY 13C-NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY. CARBOHYDR. RES. 51:179-194.

(576) ------, M. E. SLODKI, R. D. PLATTNER, AND A. JEANES. 1977. SIX UNUSUAL DEXTRANS: METHYLATION STRUCTURAL ANALYSIS BY COMBINED GLC-MS OF PER-O-ACETYL-ALDONONITRILES. CARBOHYDR. RES. 53:153-166.

(577) SIDEBOTHAM, R. L., H. WEIGEL, AND W. H. BOWEN. 1971. STUDIES ON DEXTRANS AND DEXTRANASES. PART IX. DEXTRANS ELABORATED BY CARIOGENIC ORGANISMS. (FOR PART VIII, SEE D. ABBOTT, E. J. BOURNE, AND H. WEIGEL, SECTION VII B.) CARBOHYDR. RES. 19:151-159.

(578) ------. 1974. DEXTRANS (A REVIEW). ADV. CARBOHYDR. CHEM. BIOCHEM. 30:371-444.

(579) STACEY, M., AND G. SWIFT. 1948. STRUCTURE OF THE DEXTRAN SYNTHESIZED FROM SUCROSE BY A NEW STRAIN OF BETACOCCUS ARABINOSACEOUS. J. CHEM. SOC. 1555-1559.

(580) TORII, M., E. A. KABAT, AND S. BEYCHOK. 1963. ALPHA-1,2 LINKAGES IN DEXTRAN NRRL B-1424. ARCH. BIOCHEM. BIOPHYS. 103:283-285.

(581) VAN CLEVE, J. W., W. C. SCHAEFER, AND C. E. RIST. 1956. THE STRUCTURE OF NRRL B-512 DEXTRAN. METHYLATION STUDIES. J. AM. CHEM. SOC. 78:4435-4438.

(582) ------ AND W. C. SCHAEFER. 1955. A NEW SYNTHESIS OF 2,4-DI-O-METHYL-D-GLUCOSE. J. AM. CHEM. SOC. 77:5341-5343.

(583) WHELAN, W. J. 1960. THE STRUCTURE OF DEXTRANS (A DISCUSSION). BULL. SOC. CHIM. BIOL. 42:1569-1573.

(584) WILHAM, C. A., B. H. ALEXANDER, AND A. JEANES. 1955. HETEROGENEITY IN DEXTRAN PREPARATIONS. ARCH. BIOCHEM. BIOPHYS. 59:61-75.

(585) YAMAUCHI, F., AND K. MATSUDA. 1969. ACETOLYSIS OF POLYSACCHARIDES PART V. ISOLATION OF TRISACCHARIDES CONTAINING ALPHA-1,3 LINKAGE FROM A DEXTRAN OF LEUCONOSTOC MESENTEROIDES B. (STRAIN ALSO DESIGNATED LEUCONOSTOC MESENTEROIDES NRRL B-1290 AND NRRL B-1307.) AGRIC. BIOL. CHEM. 33:103-109.

SEE ALSO: 72 282 481 770 773 807 812 857 928 934 942 943 1231 1654 1656 2325 2328

C. Structure by Enzymatic and Other Biochemical Methods

(586) ABBOTT, D., AND H. WEIGEL. 1966. STUDIES ON DEXTRANS AND DEXTRANASES. PART VII. STRUCTURES OF OLIGOSACCHARIDES FROM AN ALPHA-1,4-BRANCHED DEXTRAN. (SEE FOR: PART VI, D. ABBOTT, AND H. WEIGEL, SECTION VII B; PART VIII, D. ABBOTT, E. H. BOURNE, AND H. WEIGEL, SECTION VII B.) J. CHEM. SOC. C, 821-827.

(587) BAILEY, R. W., D. H. HUTSON, AND H. WEIGEL. 1961. THE ACTION OF A LACTOBACILLUS BIFIDUS DEXTRANASE ON A BRANCHED DEXTRAN. BIOCHEM. J. 80:514-519.

(588) BOURNE, E. J., D. H. HUTSON, AND H. WEIGEL. 1962. STUDIES ON DEXTRANS AND DEXTRANASES. 2. THE ACTION OF MOULD DEXTRANASES ON MODIFIED ISOMALTODEXTRINS AND THE EFFECT OF ANOMALOUS LINKAGES ON DEXTRAN HYDROLYSIS. (FOR PART 1, SEE R. W. BAILEY, D. H. HUTSON, AND H. WEIGEL, SECTION IV C.) BIOCHEM. J. 85:158-163.

(589) ------, D. H. HUTSON, AND H. WEIGEL. 1963. STUDIES ON DEXTRANS AND DEXTRANASES. 3. STRUCTURES OF OLIGOSACCHARIDES FROM LEUCONOSTOC MESENTEROIDES (BIRMINGHAM) DEXTRAN. BIOCHEM. J. 86:555-562.

(590) HUTSON, D. H., AND H. WEIGEL. 1963. STUDIES ON DEXTRANS AND DEXTRANASES. 4. MECHANISM OF THE ACTIONS OF INTRA- AND EXTRA-CELLULAR MOULD HYDROLASES. BIOCHEM. J. 88:588-591.

(591) MARSHALL, J. J. 1974. APPLICATION OF ENZYMIC METHODS TO THE STRUCTURAL ANALYSIS OF POLYSACCHARIDES: PART I. ADV. CARBOHYDR. CHEM. BIOCHEM. 30:257-370.

(592) ROSENFEL'D, E. L. 1958. [ENZYMATIC METHODS IN THE STUDY OF THE STRUCTURAL PECULIARITIES OF VARIOUS DEXTRANS] (IN RUSSIAN). BIOKHIMIYA 23:635-638. ALSO IN BIOCHEMISTRY 23(4):597-600.

(593) WALKER, G. J., AND A. PULKOWNIK. 1973. DEGRADATION OF DEXTRANS BY AN ALPHA-1,6-GLUCAN GLUCOHYDROLASE FROM STREPTOCOCCUS MITIS. CARBOHYDR. RES. 29:1-14.

SEE ALSO: 301 499 531 540 544 546
1656 1726 1786

VIII. The constituent di- and oligosaccharide structural units of dextrans: isomaltose (6-O-α-D-glucopyranosyl-D-glucose) and its oligomers

A. Preparation from Dextrans; Fractionation Procedures

(594) BARKER, S. A., E. J. BOURNE, AND O. THEANDER. 1955. SEPARATIONS OF CARBOHYDRATES ON CHARCOAL COLUMNS IN THE PRESENCE OF BORATE. J. CHEM. SOC. 4276-4280.

(595) GALANOS, C., O. LUDERITZ, AND K. HIMMELSPACH. 1969. THE PARTIAL ACID HYDROLYSIS OF POLYSACCHARIDES: A NEW METHOD FOR OBTAINING OLIGOSACCHARIDES IN HIGH YIELD. EUR. J. BIOCHEM. 8:332-336.

(596) JEANES, A., C. A. WILHAM, R. W. JONES, AND OTHERS. 1953. ISOMALTOSE AND ISOMALTOTRIOSE FROM ENZYMIC HYDROLYZATES OF DEXTRAN. J. AM. CHEM. SOC. 75:5911-5915.

(597) JONES, R. W., R. J. DIMLER, AND C. S. WISE. 1956. REMOVAL OF SILICATES FROM SOLUTIONS OF SUGARS SUCH AS ISOMALTOSE AND ISOMALTOTRIOSE. ANAL. CHEM. 28:1352-1353.

(598) RUTTLOFF, H. 1963. [SEPARATION OF SACCHARIDES ON CHARCOAL/CELITE COLUMNS] (IN GERMAN). ERNAEHRUNGSFORSCHUNG 7:540-560. ALSO IN CHEM. ABSTR. 1963. 59:5462D.

(599) SUZUKI, H., K. TONOMURA, K. NAKAMURA, AND O. TANABE. 1959. BIOSYNTHESIS OF C14-LABELED ISOMALTOSE. RADIOISOTOPES 8:155-158. ALSO IN CHEM. ABSTR. 1960. 54:22857C.

(600) ------, K. TONOMURA, AND O. TANABE. 1961. BIOSYNTHESIS OF C14-LABELED ISOMALTOSE. KOGYO GIJUTSUIN HAKKO KENKYUSHO KENKYU HOKOKU 19:55-58. ALSO IN CHEM. ABSTR. 1961. 55:27535E.

(601) TAYLOR, P. M., AND W. J. WHELAN. 1962. AN IMPROVED METHOD FOR FRACTIONATING SUGARS ON CHARCOAL. CHEM. IND. (LONDON) (1):44-45.

(602) ------ AND W. J. WHELAN. 1963. ISOMALTOSE, ISOMALTOTRIOSE, ISOMALTOTETRAOSE, AND ISOMALTOPENTAOSE. BIOCHEM. PREP. 10:86-90.

(603) TEICHMANN, B., K. HIMMELSPACH, AND O. WESTPHAL. 1971. [RECOVERY OF SUGARS OF THE ISOMALTOSE SERIES (ISOMALTOSE UP TO ISOMALTODECAOSE) BY PARTIAL HYDROLYSIS OF DEXTRAN] (IN GERMAN). J. PRAKT. CHEM. 313(5):861-874. ALSO IN CHEM. ABSTR. 1972. 76:86040S.

(604) TORII, M., AND K. SAKAKIBARA. 1974. COLUMN CHROMATOGRAPHIC SEPARATION AND QUANTITATION OF ALPHA-LINKED GLUCOSE OLIGOSACCHARIDES. J. CHROMATOGR. 96:255-257.

(605) TURVEY, J. R., AND W. J. WHELAN. 1957. PREPARATION AND CHARACTERIZATION OF ISOMALTODEXTRINS. BIOCHEM. J. 67:49-52.

(606) WALKER, G. J. 1973. PREPARATION OF ISOMALTOSE OLIGOSACCHARIDES LABELLED WITH 14C IN THE NON-REDUCING TERMINAL UNIT, AND THEIR USE IN STUDIES OF DEXTRANASE ACTIVITY. CARBOHYDR. RES. 30:1-10.

(607) WHELAN, W. J. 1962. ISOMALTODEXTRINS: PARTIAL ACID HYDROLYSIS OF DEXTRAN. METHODS CARBOHYDR. CHEM. 1:321-324.

SEE ALSO: 301 586 THROUGH 593 604 964 1792

B. Other Natural Occurrences

Isomaltose in honey; isomaltosyl units in bacterial polysaccharides other than dextrans.

(608) KANE, J. A., W. W. KARAKAWA, AND J. H. PAZUR. 1972. GLYCANS FROM STREPTOCOCCAL CELL WALLS: STRUCTURAL FEATURES OF A DIHETEROGLYCAN ISOLATED FROM THE CELL WALL OF STREPTOCOCCUS BOVIS. J. IMMUNOL. 108:1218-1226.

(609) SAIER, M. H., JR., AND C. E. BALLOU. 1968. THE 6-O-METHYLGLUCOSE-CONTAINING LIPOPOLYSACCHARIDE OF MYCOBACTERIUM PHLEI. STRUCTURE OF THE REDUCING END OF THE POLYSACCHARIDE. J. BIOL. CHEM. 243:4319-4331.

(610) SIDDIQUI, I. R., AND B. FURGALA. 1967. ISOLATION AND CHARACTERIZATION OF OLIGOSACCHARIDES FROM HONEY. PART I. DISACCHARIDES. J. APIC. RES. 6:139-145.

(611) ------ AND B. FURGALA. 1968. ISOLATION AND CHARACTERIZATION OF OLIGOSACCHARIDES FROM HONEY. PART II. TRISACCHARIDES. J. APIC. RES. 7:51-59.

(612) WHITE, J. W., JR., AND N. HOBAN. 1959. COMPOSITION OF HONEY. IV. IDENTIFICATION OF THE DISACCHARIDES. ARCH. BIOCHEM. BIOPHYS. 80:386-392.

C. Occurrences (Natural and Synthetic) in Enzymatic and Acid Hydrolyzates of Starch and Related Glucans

(613) AHLBORG, K., AND K. MYRBACK. 1941. [LIMIT DEXTRINS AND STARCHES. XII. PREPARATION AND DETERMINATION OF THE STRUCTURE OF A DIFFICULTY HYDROLYZABLE DIGLUCIDE (ISOMALTOSE) FROM STARCH] (IN GERMAN). BIOCHEM. Z. 308:187-195.

(614) ASO, K., AND K. SHIBASAKI. 1955. [SUGARS IN THE ACID HYDROLYZATES OF POLYSACCHARIDES. I. SUGAR COMPOSITION OF SWEET POTATO STARCH HYDROL] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 29: 856-861. ALSO IN TOHOKU J. AGRIC. RES. 6:159-169 AND CHEM. ABSTR. 1956. 50:17498B.

(615) HAY, G. W., AND F. SMITH. 1962. THE CARBOHYDRATES OF BEER. I. THE NEUTRAL, LOW-MOLECULAR-WEIGHT COMPONENTS OF COMMERCIAL BEER. PROC. AM. SOC. BREW. CHEM. 127-131.

(616) MATSUDA, K., AND K. ASO. 1954. STUDIES ON THE UNFERMENTABLE SUGARS (V). ISOLATION OF ISOMALTOSE AND SAKEBIOSE FROM KOJI EXTRACT. TOHOKU J. AGRIC. RES. 5:125-129. ALSO IN J. FERMEN. TECHNOL. 32(10):399-402 AND CHEM. ABSTR. 1956. 50:5053A.

(617) MONTGOMERY, E. M., F. B. WEAKLEY, AND G. E. HILBERT. 1949. ISOLATION OF 6-(ALPHA-D-GLUCOPYRANOSYL)-D-GLUCOSE (ISOMALTOSE) FROM ENZYMIC HYDROLYZATES OF STARCH. J. AM. CHEM. SOC. 71:1682-1687.

(618) MYRBACK, K. 1954. STARCH DEGRADATION BY SALIVARY AMYLASE. II. ARK. KEMI 7:53-59.

(619) OUGH, L. D. 1962. PAPER CHROMATOGRAPHIC ANALYSIS OF THE DISACCHARIDE FRACTION OF 60 DEXTROSE EQUIVALENT ACID HYDROLYZED CORN SYRUP. ANAL. CHEM. 34:660-664.

(620) SATO, A., AND H. ONO. 1962. SUGARS OF HYDROL FROM ACID HYDROLYSIS OF STARCH I. MONO- AND DISACCHARIDES. KOGYO GIJUTSUIN HAKKO KENKYUSHO KENKYU HOKOKU 22:99-107. ALSO IN CHEM. ABSTR. 1964. 60:13425G.

(621) SOWDEN, J. C., AND A. S. SPRIGGS. 1956. THE ISOLATION OF 5-O-BETA-D-GLUCOPYRANOSYL-D-GLUCOSE FROM HYDROL. J. AM. CHEM. SOC. 78:2503-2505.

(622) THOMPSON, A., M. L. WOLFROM, AND E. J. QUINN. 1953. ACID REVERSION IN RELATION TO ISOMALTOSE AS A STARCH HYDROLYTIC PRODUCT. J. AM. CHEM. SOC. 75:3003-3004.

(623) WOLFROM, M. L., J. T. TYREE, T. T. GALKOWSKI, AND A. N. O'NEILL. 1951. ACID DEGRADATION OF AMPLOPECTIN TO ISOMALTOSE AND MALTOTRIOSE. J. AM. CHEM. SOC. 73:4927-4929.

(624) ------ AND A. THOMPSON. 1957. DEGRADATION OF GLYCOGEN TO ISOMALTOTRIOSE AND NIGEROSE. J. AM. CHEM. SOC. 79:4212-4215.

D. Chemical Characterization

Proof of structure; linkage analysis; and rates and kinetics of hydrolysis and acetolysis.

(625) BARKER, S. A., A. R. LAW, P. J. SOMERS, AND M. STACEY. 1967. LINKAGE ANALYSIS OF CARBOHYDRATES BY USING SACCHARINIC ACID FORMATION. CARBOHYDR. RES. 3:435-444.

(626) CLANCY, M. J., AND W. J. WHELAN. 1959. SELECTIVE PERIODATE OXIDATION OF REDUCING-END GROUPS IN OLIGOSACCHARIDES. CHEM. IND. (LONDON) (22):673-675.

(627) FUJIMOTO, K., K. MATSUDA, AND K. ASO. 1962. ACETOLYSIS OF POLYSACCHARIDES. IV. ACETOLYSIS AND ACID HYDROLYSIS OF GLUCO-BIOSES. TOHOKU J. AGRIC. RES. 13:61-67. ALSO IN CHEM. ABSTR. 1962. 57:15211D.

(628) GEORG, A. 1930. [TITLE NOT AVAILABLE.] (6-D-GLUCOPYRANOSYL STRUCTURE ESTABILISHED FOR ISOMALTOSE FROM ACID REVERSION OF D-GLUCOSE.) COMPT. REND. PHYS. HIST. NATL. GENEVE 47:94.

(629) JONES, R. W., R. J. DIMLER, AND C. E. RIST. 1955. KINETICS OF HYDROLYSIS OF ISOMALTOTRIOSE AND ISOMALTOTRIITOL. J. AM. CHEM. SOC. 77:1659-1663.

(630) MELLER, A. 1964. SOME CONSIDERATIONS OF THE KINETICS OF THE ACID HYDROLYSIS OF POLY- AND OLIGOSACCHARIDES. II. THE TRISACCHARIDES ISOMALTOTRIITOL, PANITOL, AND ISOMALTOTRIOSE. J. POLYM. SCI. A, 2:2373-2384.

(631) ------. 1968. METHOD FOR COMPUTING THE SPECIFIC RATE OF HYDROLYSIS OF GLUCOSIDIC BONDS IN SOME TRISACCHARIDES. J. POLYM. SCI. A, 6:2415-2417.

(632) MYRBACK, K. 1941. [CONSTITUTION OF THE SO-CALLED ISOMALTOSE WHICH IS FORMED BY THE REVERSION OF GLUCOSE] (IN GERMAN). SVEN. KEM. TIDSKR. 53:264-269. ALSO IN CHEM. ABSTR. 1942. 36:413.

(633) PAINTER, T. J. 1963. A COLORIMETRIC METHOD FOR MEASURING THE RATE OF DEGRADATION OF DISACCHARIDES BY ALKALI. CHEM. IND. (LONDON) (1):36-37.

(634) PERLIN, A. S. 1955. STRUCTURE OF REDUCING DISACCHARIDES BY LEAD TETRAACETATE OXIDATION. ANAL. CHEM. 27:396-399.

(635) ROSENFELD, L., AND C. E. BALLOU. 1974. ACETOLYSIS OF DISACCHARIDES: COMPARATIVE KINETICS AND MECHANISM. CARBOHYDR. RES. 32:287-298.

(636) TAKAHASHI, K., Y. YOSHIKAWA, K. HIROMI, AND S. ONO. 1965. CALORIMETRIC STUDIES ON HYDROLYSIS OF GLUCOSIDES. II. HEATS OF HYDROLYSIS OF ALPHA-1,6 GLUCOSIDIC LINKAGES. J. BIOCHEM. 58(3):251-254.

(637) WOLFROM, M. L., E. N. LASSETTRE, AND A. N. O'NEILL. 1951. DEGRADATION OF GLYCOGEN TO ISOMALTOSE. J. AM. CHEM. SOC. 73:595-599.

(638) ------, A. THOMPSON, AND A. M. BROWNSTEIN. 1958. STRUCTURES OF ISOMALTOSE AND GENTIOBIOSE. J. AM. CHEM. SOC. 80:2015-2018.

(639) ------, A. THOMPSON, AND C. E. TIMBERLAKE. 1963. COMPARATIVE HYDROLYSIS RATES OF THE REDUCING DISACCHARIDES OF D-GLUCOPYRANOSE. CEREAL CHEM. 40:82-86.

E. Analytical

Chemical detection, identification, differentiation, and measurement.

(640) ASO, K., AND S. HAMADA. 1955. UNFERMENTABLE SUGARS. XII. IONOPHORESIS OF SUGARS. J. FERMENT. TECHNOL. 33:45-47. ALSO IN TOHOKU J. AGRIC. RES. 5:317-321 AND CHEM. ABSTR. 1955. 49:16480I.

(641) ------, F. YAMAUCHI, AND K. MATSUDA. 1955. UNFERMENTABLE SUGARS. XIII. PAPER CHROMATOGRAPHY OF GLUCOPYRANOSIDIC POLYMER. 1. CORRELATION OF CHEMICAL STRUCTURE WITH PAPERGRAM COLOR. J. FERMENT. TECHNOL. 33:117-121. ALSO IN CHEM. ABSTR. 1955. 49:16481A.

(642) ------ AND F. YAMAUCHI. 1955. UNFERMENTABLE SUGARS. XIV. PAPER CHROMATOGRAPHY OF D-GLUCOPYRANOSIDIC POLYMER. 2. CORRELATION OF GLUCOSE-POLYMER STRUCTURE WITH THE RF VALUE. J. FERMENT. TECHNOL. 33:194-197. ALSO IN CHEM. ABSTR. 1955. 49:15265I.

(643) BAILEY, R. W. 1962. COLOUR REACTIONS BETWEEN SUGARS AND DIPHENYLAMINE-UREA AND DIPHENYLAMINE-PARA-ANISIDINE ON PAPER CHROMATOGRAMS. J. CHROMATOGR. 8:57-62.

(644) BARKER, S. A., E. J. BOURNE, P. M. GRANT, AND M. STACEY. 1957. THE SEPARATION OF REDUCING CARBOHYDRATES AS THEIR N-SUBSTITUTED GLYCOSYL AMMONIUM IONS. J. CHEM. SOC. 2067-2071.

(645) ------, B. W. HATT, J. F. KENNEDY, AND P. J. SOMERS. 1969. SEPARATIONS OF CARBOHYDRATES BASED ON ION EXCLUSION AND GEL PERMEATION. CARBOHYDR. RES. 9:327-334.

(646) BERGER, P. D., AND S. E. BORODKIN. 1967. THE APPLICATION OF THIN-LAYER CHROMATOGRAPHY TO THE SEPARATION OF CARBOHYDRATES IN SUGAR REFINING. INT. SUGAR J. 69:3-7.

(647) BERTONIERE, N. R., L. F. MARTIN, AND S. P. ROWLAND. 1971. STEREOSELECTIVITY IN THE ELUTION OF SUGARS FROM COLUMNS OF SEPHADEX G-15. CARBOHYDR. RES. 19:189-196.

(648) BORUCH, M. 1968. [SEPARATION OF SUGARS BY ION-EXCHANGE CHROMATOGRAPHY] (IN POLISH). ZESZ. NAUK. POLITECH. LODZ. CHEM. SPOZYW. 14:5-16. ALSO IN CHEM. ABSTR. 1968. 68:115860B.

(649) BOURNE, E. J., D. H. HUTSON, AND H. WEIGEL. 1959. PAPER IONOPHORESIS OF CARBOHYDRATES IN MOLYBDATE SOLUTIONS. CHEM. IND. (LONDON) (33):1047-1048.

(650) ------, D. H. HUTSON, AND H. WEIGEL. 1960. PAPER IONOPHORESIS OF SUGARS AND OTHER CYCLIC POLYHYDROXY-COMPOUNDS IN MOLYBDATE SOLUTION. J. CHEM. SOC. 4252-4256.

(651) CHIBA, S., AND T. SHIMOMURA. 1967. CIRCULAR THIN-LAYER CHROMATOGRAPHY OF OLIGOSACCHARIDES. AGRIC. BIOL. CHEM. 31:255-256.

(652) FLEMING, I. D., AND H. F. PEGLER. 1963. THE DETERMINATION OF GLUCOSE IN THE PRESENCE OF MALTOSE AND ISOMALTOSE BY A STABLE, SPECIFIC ENZYMIC REAGENT. ANALYST 88:967-968.

(653) FOSTER, A. B. 1953. IONOPHORESIS OF SOME DISACCHARIDES. J. CHEM. SOC. 982-986.

(654) ------ AND M. STACEY. 1955. IONOPHORESIS OF CARBOHYDRATES. PART II. SOME PYRANOSE AND FURANOSE DERIVATIVES OF D-GLUCOSE. J. CHEM. SOC. 1778-1784.

(655) FRAHN, J. L., AND J. A. MILLS. 1956. DETERMINATION OF THE MOLECULAR WEIGHT OF ALDOSE SUGARS BY PAPER IONOPHORESIS. CHEM. IND. (LONDON) (41):1137-1138.

(656) GIRI, K. V., K. SAROJA, R. VENKATARAMAN, AND P. L. N. RAO. 1954. ISOLATION OF ISOMALTOSE [6-(ALPHA-D-GLUCOPYRANOSYL)-D-GLUCOSE] FROM THE CULTURE FILTRATE OF PENICILLIUM CHRYSOGENUM Q-176. ARCH. BIOCHEM. BIOPHYS. 51:62-67.

(657) HARADA, T. 1962. A NEW COLOUR REACTION OF SUGARS WITH ETHYL MALONATE. BIOCHIM. BIOPHYS. ACTA 63:334-336.

(658) HAY, G. W., B. A. LEWIS, AND F. SMITH. 1963. THIN-FILM CHROMATOGRAPHY IN THE STUDY OF CARBOHYDRATES. J. CHROMATOGR. 11:479-486.

(659) HUGHES, R. C., AND W. J. WHELAN. 1959. EFFECT OF SODIUM BORATE ON THE OPTICAL ROTATION OF SUGARS. CHEM. IND. (LONDON) (2):50.

(660) JEANES, A., C. S. WISE, AND R. J. DIMLER. 1951. IMPROVED TECHNIQUES IN PAPER CHROMATOGRAPHY OF CARBOHYDRATES. ANAL. CHEM. 23:415-420.

(661) ------, C. A. WILHAM, AND G. E. HILBERT. 1953. ACETOBROMINOLYSIS OF DI- AND POLYSACCHARIDE ACETATES. J. AM. CHEM. SOC. 75:3667-3673.

(662) JORGENSEN, E., B. BIRGITTE, AND O. B. JORGENSEN. 1961. A METHOD FOR THE DETERMINATION OF REDUCING DISACCHARIDES IN THE PRESENCE OF ALDOHEXOSES. ACTA CHEM. SCAND. 15:710-711.

(663) KO, A. M. Y., AND P. J. SOMERS. 1974. AUTOMATED HYPOIODITE OXIDATION OF CARBOHYDRATES. CARBOHYDR. RES. 34:57-64.

(664) PEAT, S., W. J. WHELAN, AND J. G. ROBERTS. 1956. DETERMINATION OF THE DEGREE OF POLYMERIZATION OF REDUCING OLIGOSACCHARIDES. J. CHEM. SOC. 2258-2260.

(665) SCHAEFER, W. C., AND J. W. VAN CLEVE. 1956. QUANTITATIVE PAPER CHROMATOGRAPHY OF METHYLATED ALDOSE SUGARS. IMPROVED COLORIMETRIC METHOD USING ANILINE HYDROGEN PHTHALATE. ANAL. CHEM. 28:1290-1293.

(666) SCHWIMMER, S., AND A. BEVENUE. 1956. REAGENT FOR DIFFERENTIATION OF 1,4- AND 1,6-LINKED GLUCOSACCHARIDES. SCIENCE 123:543-544.

(667) WHISTLER, R. L., AND J. L. HICKSON. 1955. DETERMINATION OF SOME COMPONENTS IN CORN SIRUPS BY QUANTITATIVE PAPER CHROMATOGRAPHY. ANAL. CHEM. 27:1514-1517.

(668) WOLFROM, M. L., AND G. SCHWAB. 1969. QUANTITATIVE ANALYSIS OF GENTIOBIOSE AND ISOMALTOSE IN ADMIXTURE, AND ITS APPLICATION TO THE CHARACTERIZATION OF DEXTRINS. CARBOHYDR. RES. 9:409-413.

F. Physicochemical Identification, Measurements and Constants; and Related Biochemical Data

(669) BAILEY, R. W. 1965. TABLE 16--PHYSICAL CONSTANTS OF ISOMALTOSE AND ITS DERIVATIVES AND TABLE 17--PHYSICAL CONSTANTS OF ISOMALTO-DEXTRINS AND THEIR DERIVATIVES. IN OLIGOSACCHARIDES: A COMPREHENSIVE ACCOUNT OF ALL KNOWN SUGARS OF THE POLYSACCHARIDE CLASS OF COMPOUNDS, PP. 66-68. MACMILLAN CO., NEW YORK.

(670) BARKER, S. A., E. J. BOURNE, M. STACEY, AND D. H. WHIFFEN. 1954. INFRA-RED SPECTRA OF CARBOHYDRATES. PART 1. SOME DERIVATIVES OF D-GLUCOPYRANOSE. J. CHEM. SOC. 171-176.

(671) BEYCHOK, S., AND E. A. KABAT. 1965. OPTICAL ACTIVITY AND CONFORMATION OF CARBOHYDRATES. I. OPTICAL ROTATORY DISPERSION STUDIES ON IMMUNOCHEMICALLY REACTIVE AMINO SUGARS AND THEIR GLYCOSIDES, MILK OLIGOSACCHARIDES, OLIGOSACCHARIDES OF GLUCOSE, AND BLOOD GROUP SUBSTANCES. BIOCHEMISTRY 4:2565-2574.

(672) HAVERKAMP, J., M. J. A. DE BIE, AND J. F. G. VLIEGENTHART. 1974. 13C- AND 1H-NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY OF PERMETHYLATED DISACCHARIDES. CARBOHYDR. RES. 37:111-125.

(673) JENNINGS, H. J., AND I. C. P. SMITH. 1973. DETERMINATION OF THE COMPOSITION AND SEQUENCE OF A GLUCAN CONTAINING MIXED LINKAGES BY CARBON-13 NUCLEAR MAGNETIC RESONANCE. J. AM. CHEM. SOC. 95:606-608.

(674) KAMERLING, J. P., M. J. A. DE BIE, AND J. F. G. VLIEGENTHART. 1972. A PMR STUDY OF THE ANOMERIC PROTONS IN PERTRIMETHYLSILYL OLIGOSACCHARIDES, A DETERMINATION OF THE CONFIGURATION OF THE GLYCOSIDIC BOND. TETRAHEDRON 28:3037-3047.

(675) LEE, Y-C., AND C. E. BALLOU. 1965. PREPARATION OF MANNOBIOSE, MANNOTRIOSE, AND A NEW MANNOTETRAOSE FROM SACCHAROMYCES CEREVISIAE MANNAN. (INCLUDES PROTON MAGNETIC RESONANCE SIGNALS FOR ISOMALTO-OLIGOSACCHARIDES.) BIOCHEMISTRY 4:257-264.

(676) SCOTT, T. A., JR., AND F. R. SENTI. 1955. PREPARATION OF METHYL GLYCOSIDES OF HOMOLOGOUS ALPHA-1,6'-LINKED GLUCO-OLIGOSACCHARIDES AND THE OPTICAL ROTATION OF THEIR CUPRAMMONIUM COMPLEXES. J. AM. CHEM. SOC. 77:3816-3821.

(677) SHIRAISHI, H., N. YAMAOKA, K. MATSUDA, AND K. TUZIMURA. 1971. THE ASSIGNMENT OF ANOMERIC CONFIGURATION OF GLUCOBIOSES BY OPTICAL ROTATORY DISPERSION. AGRIC. BIOL. CHEM. 35(9):1463-1464.

(678) USUI, T., N. YAMAOKA, K. MATSUDA, K. TUZIMURA, H. SUGIYAMA, AND S. SETO. 1973. 13C NUCLEAR MAGNETIC RESONANCE SPECTRA OF GLUCOBIOSES, GLUCOTRIOSES, AND GLUCANS. J. CHEM. SOC. PERKIN TRANS. 1, 20:2425-2432.

(679) WHITE, J. W., JR., C. R. EDDY, J. PETTY, AND N. HOBAN. 1958. INFRARED IDENTIFICATION OF DISACCHARIDES. ANAL. CHEM. 30:506-513.

(680) WHYTE, J. N. C. 1971. PMR SPECTROMETRIC DETERMINATION OF THE DEGREE OF POLYMERIZATION AND ANOMERIC CONFIGURATION IN OLIGOSACCHARIDES. ANAL. BIOCHEM. 42:476-480.

SEE ALSO: 1750 1754 2506

G. Derivatives of Isomaltose and Its Oligomers

From chemical or enzymatic action.

(681) ANGUS, H. J. F., AND H. WEIGEL. 1964. COMPLEXES BETWEEN POLYHYDROXY-COMPOUNDS AND INORGANIC OXYACIDS. PART IV. DIMOLYBDATE AND DITUNGSTATE IONS AS COMPLEXING AGENTS, AND PAPER ELECTROPHORESIS OF MALTODEXTRINOLS AND ISOMALTODEXTRINOLS IN MOLYBDATE AND TUNGSTATE SOLUTIONS. J. CHEM. SOC. 3994-4000.

(682) BOURNE, E. J., D. H. HUTSON, AND H. WEIGEL. 1961. COMPLEXES BETWEEN MOLYBDATE AND ACYCLIC POLYHYDROXY-COMPOUNDS. J. CHEM. SOC. 35-38.

(683) EL KHADEM, H. 1964. DIANHYDROPHENYLOSAZONE ACETATES FROM ISOMALTOSE AND GENTIOBIOSE. J. ORG. CHEM. 29:3072-3074.

(684) GEORGES, L. W., I. L. MILLER, AND M. L. WOLFROM. 1947. THE CRYSTALLINE OCTAACETATE OF 6-ALPHA-D-GLUCOPYRANOSIDO-BETA-D-GLUCOSE. J. AM. CHEM. SOC. 69:473.

(685) LARM, O., B. LINDBERG, S. SVENSSON, AND E. A. KABAT. 1972. STRUCTURAL STUDIES ON PNEUMOCOCCUS TYPE II CAPSULAR POLYSACCHARIDE. (A STRUCTURAL COMPONENT: ISOMALTOBIOSYLURONIC ACID.) CARBOHYDR. RES. 22:391-397.

(686) MONTGOMERY, E. M., F. B. WEAKLEY, AND G. E. HILBERT. 1947. CRYSTALLINE DERIVATIVES OF 6-ALPHA-D-GLUCOPYRANOSIDE-BETA-D-GLUCOSE FROM STARCH. J. AM. CHEM. SOC. 69:2249.

(687) REESE, E. T., J. E. LOLA, AND F. W. PARRISH. 1969. MODIFIED SUBSTRATES AND MODIFIED PRODUCTS AS INDUCERS OF CARBOHYDRASES. J. BACTERIOL. 100:1151-1154.

(688) RENDLEMAN, J. A., JR. 1972. ALPHA-CELLOBIOSE AND ALPHA-ISOMALTOSE FROM CRYSTALLINE COMPLEXES WITH SODIUM IODIDE. CARBOHYDR. RES. 21:235-247.

(689) ROY, N., AND C. P. J. GLAUDEMANS. 1968. THE SYNTHESIS OF THREE FULLY ACETYLATED ALDOBIOURONIC ACID METHYL ESTERS, INCLUDING 6-O-(METHYL 2,3,4-TRI-O-ACETYL-ALPHA-D-GLUCOPYRANOSYLURONATE)-TETRA-O-ACETYL-BETA-D-GLUCOPYRANOSE. J. ORG. CHEM. 33:1559-1562.

(690) STERNBERG, M., AND L. B. LOCKWOOD. 1969. OXIDATION OF ISOMALTOSE BY PSEUDOMONAS TAETROLENS. J. BACTERIOL. 99:623.

(691) SUZUKI, Y., AND H. KATAGIRI. 1963. STUDIES ON DEXTRANSUCRASE I. FORMATION OF RIBOFLAVINYLGLUCOSIDE IN DEXTRAN-PRODUCING CULTURES OF LEUCONOSTOC MESENTEROIDES. J. VITAMINOL. 9:285-292.

(692) TEICHMANN, B., K. HIMMELSPACH, AND O. WESTPHAL. 1971. [SYNTHESIS OF 1-(META-SUBSTITUTED)PHENYL-1H-PYRAZOLO[3,4-BETA]QUINOXALINES [1-(META-SUBSTITUTED) PHENYLFLAVAZOLE]] (IN GERMAN). Z. CHEM. 11(10):380-381.
ALSO IN CHEM. ABSTR. 1972. 25506B.

(693) ------, K. HIMMELSPACH, AND O. WESTPHAL. 1972. [1-(META-AMINOPHENYL)-1H-PYRAZOLO[3,4-BETA]QUINOXALINE DERIVATIVES [1-(META-AMINOPHENYL)FLAVAZOLE DERIVATIVES] OF SUGARS OF THE ISOMALTOSE, MALTOSE AND CELLOBIOSE SERIES] (IN GERMAN). J. PRAKT. CHEM. 314(5-6):877-883. ALSO IN CHEM. ABSTR. 1973. 78:58712K.

(694) ------, K. HIMMELSPACH, AND O. WESTPHAL. 1973. [1-(META-HYDROXYPHENYL)-1H-PYRAZOLO[3,4-BETA]QUINOXALINE DERIVATIVES [1-(META-HYDROXYPHENYL) FLAVAZOLE DERIVATIVES] OF SUGARS OF THE ISOMALTOSE, MALTOSE AND CELLOBIOSE SERIES] (IN GERMAN). J. PRAKT. CHEM. 315(3):517-525. ALSO IN CHEM. ABSTR. 1973. 79:66701S.

(695) ------. 1972. [PAPER CHROMATOGRAPHIC BEHAVIOR OF HOMOLOGOUS LINEAR POLYMERS: THE ISOMALTOSE-, MALTOSE-, AND CELLOBIOSE- SERIES AND THEIR 1-(META-SUBSTITUTED PHENYL)-FLAVAZOLES] (IN GERMAN, ENGLISH SUBTITLE AND SUMMARY). J. CHROMATOGR. 70:99-108.

(696) WOLFROM, M. L., L. W. GEORGES, AND I. L. MILLER. 1949. CRYSTALLINE DERIVATIVES OF ISOMALTOSE. (INCLUDES REFERENCES, BEGINNING IN 1872, ON EFFORTS TO ISOLATE AND IDENTIFY "ISOMALTOSE" FROM ACID REVERSION OF GLUCOSE AND ENZYMOLYSIS OF STARCH.) J. AM. CHEM. SOC. 71:125-127.

(697) ------ AND A. THOMPSON. 1954. ISOMALTOSE PHENYLOSAZONE AND PHENYLOSOTRIAZOLE. J. AM. CHEM. SOC. 76:5173-5174.

SEE ALSO: 264 332 622 723 1451 1455 1681 1748 1764 1790

H. Di- and Higher Saccharides of 1,6-Linked α-D-Glucopyranose: Formation by Chemical Synthesis and by Action of Acid or Heat

(Selected references.)

(698) BERRY, J. M., AND G. G. S. DUTTON. 1974. SYNTHESIS OF ISOMALTOSE AND OTHER ALPHA-D-GLUCOPYRANOSIDES. CARBOHYDR. RES. 38:339-345.

(699) BREDERECK, H., A. WAGNER, D. GEISSEL, AND H. OTT. 1962. [OLIGOSACCHARIDE SYNTHESIS, IV. SYNTHESIS OF DISACCHARIDES HAVING ALPHA- AND BETA-CONFIGURATION] (IN GERMAN). CHEM. BER. 95:3064-3069.

(700) EBY, R., AND C. SCHUERCH. 1974. A CHEMICAL SYNTHESIS OF BENZYLATED METHYL ALPHA-ISOMALTO OLIGOSACCHARIDES. MACROMOLECULES 7:397-398.

(701) FISCHER, E. 1890. [SYNTHESIS OF A NEW GLUCOBIOSE] (IN GERMAN). (FIRST USE OF THE NAME ISOMALTOSE.) CHEM. BER. 23:3687-3691.

(702) IGARASHI, K., J. IRISAWA, AND T. HONMA. 1975. SYNTHESES OF ALPHA-D-LINKED DISACCHARIDES. CARBOHYDR. RES. 39:341-343.

(703) KOTO, S., T. UGHIDA, AND S. ZEN. 1973. SYNTHESES OF ISOMALTOSE, ISOMALTOTETRAOSE, AND ISOMALTOOCTAOSE. BULL. CHEM. SOC. JPN. 46:2520-2523.

(704) LINDBERG, B. 1949. ACTION OF STRONG ACIDS ON ACETYLATED GLYCOSIDES V. SYNTHESIS OF BETA-ISOMALTOSE OCTAACETATE. ACTA CHEM. SCAND. 3:1355-1357.

(705) MANNERS, D. J., G. A. MERCER, AND J. J. M. ROWE. 1965. ALPHA-1,4-GLUCOSANS. PART XIX. THE ACTION OF ACID ON MALTOSE AND STARCH-TYPE POLYSACCHARIDES. J. CHEM. SOC. 2150-2156.

(706) MYRBACK, K. 1941. [ISOMALTOSE FROM GLUCOSE BY REVERSION] (IN GERMAN). SVEN. KEM. TIDSKR. 53:67-77. ALSO IN CHEM. ABSTR. 1941. 35:5098.

(707) SUGISAWA, H., AND H. EDO. 1964. THERMAL POLYMERIZATION OF GLUCOSE. CHEM. IND. (LONDON) (21):892-893.

(708) WOLFROM, M. L., AND A. THOMPSON. 1962. ISOMALTOSE AND GENTIOBIOSE: ACID REVERSION OF D-GLUCOSE. METHODS CARBOHYDR. CHEM. 1:316-318.

(709) ------, A. O. PITTET, AND I. C. GILLAM. 1961. A CHEMICAL SYNTHESIS OF ISOMALTOSE. PROC. NATL. ACAD. SCI. (U.S.) 47:700-705.

(710) ------ AND K. IGARASHI. 1964. ISOMALTOSE SYNTHESIS [ABSTRACT 58]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 148:24D.

(711) ------, K. IGARASHI, AND K. KOIZUMI. 1965. ISOMALTOSE SYNTHESIS UTILIZING 2-SULFONATE DERIVATIVES OF D-GLUCOSE. J. ORG. CHEM. 30:3841-3844.

I. Di- and Higher Saccharides of 1,6-Linked α-D-Glucopyranose: Biosynthesis by Various α-Glucosidases and Transglucosylases

(Selected references.)

(712) ABDULLAH, M., I. J. GOLDSTEIN, AND W. J. WHELAN. 1962. STRUCTURAL STUDIES OF DEXTRANS. PART II. THE ENZYMIC SYNTHESIS OF 3-ALPHA-ISOMALTOSYLGLUCOSE FROM NIGEROSE. J. CHEM. SOC. 176-178.

(713) ASO, K., K. SHIBASAKI, AND F. YAMANOUCHI. 1952. [UNFERMENTABLE SUGARS. II. PRODUCTION OF UNFERMENTABLE SUGARS FROM STARCH, MALTOSE, AND GLUCOSE BY FUNGAL ENZYMES] (IN JAPANESE, ENGLISH SUMMARY). J. FERMENT. TECHNOL. 30:316-320. ALSO IN CHEM. ABSTR. 1953. 47:2933E.

(714) FRENCH, D. 1951. STRUCTURE OF PAN'S CRYSTALLINE TRISACCHARIDE. (4-[6-(ALPHA-D-GLUCOPYRANOSYL)ALPHA-D-GLUCOPYRANOSYL] D-GLUCOSE.) SCIENCE 113:352-353.

(715) ------, P. M. TAYLOR, AND W. J. WHELAN. 1964. THE MECHANISM OF CARBOHYDRASE ACTION 10. ENZYMIC SYNTHESIS AND PROPERTIES OF 6-ALPHA-MALTOSYL GLUCOSE. BIOCHEM. J. 90:616-620.

(716) LUKOMSKAYA, I. S. 1962. SYNTHESIS OF OLIGOSACCHARIDES WITH DIFFERENT TYPES OF LINKAGE IN ANIMAL TISSUES. ENZYMOLOGIA 24:327-337.

(717) ------. 1962. [SYNTHESIS OF OLIGOSACCHARIDES WITH VARIOUS BOND TYPES FROM D-GLUCOSE UNDER THE INFLUENCE OF AN ENZYMIC PREPARATION FROM LIVER] (IN RUSSIAN). DOKL. AKAD. NAUK SSSR 142:1190-1192. ALSO IN CHEM. ABSTR. 1962. 57:11522E.

(718) PAN, S. C., L. W. NICHOLSON, AND P. KOLACHOV. 1951. ISOLATION OF A CRYSTALLINE TRISACCHARIDE FROM THE UNFERMENTABLE CARBOHYDRATE PRODUCED ENZYMICALLY FROM MALTOSE. (PANOSE.) J. AM. CHEM. SOC. 73:2547-2550.

(719) ------, L. W. NICHOLSON, AND P. KOLACHOV. 1953. ENZYMIC SYNTHESIS OF OLIGOSACCHARIDES--A TRANSGLYCOSIDATION. ARCH. BIOCHEM. BIOPHYS. 42:406-420.

(720) PAZUR, J. H. 1955. REVERSIBILITY OF ENZYMATIC TRANSGLUCOSYLATION REACTIONS. J. BIOL. CHEM. 216:531-538.

(721) ------ AND T. ANDO. 1962. ISOMALTOSE FROM MALTOSE BY FUNGAL TRANSGLUCOSYLASE. METHODS IN CARBOHYDR. CHEM. 1:319-320.

(722) ------ AND S. OKADA. 1967. PROPERTIES OF THE GLUCOAMYLASE FROM RHIZOPUS DELEMAR. CARBOHYDR. RES. 9:371-379.

(723) SAWAI, T., AND E. J. HEHRE. 1962. A NOVEL AMYLASE (CANDIDA TRANSGLUCOSYL-AMYLASE) THAT CATALYZES GLUCOSYL TRANSFER FROM STARCH AND DEXTRINS. J. BIOL. CHEM. 237:2047-2052.

(724) ------ AND E. J. HEHRE. 1963. THE DISTRIBUTION OF TRANSGLUCOSYL-AMYLASE AMONG CANDIDA YEASTS. ANTONIE VAN LEEUWENHOEK 29:377-385.

(725) SHIBASAKI, K., AND K. ASO. 1953. STUDIES ON THE UNFERMENTABLE SUGARS. VII. THE SYNTHESIS OF ISOMALTOSE FROM GLUCOSE BY ASPERGILLUS NIGER. J. FERMENT. TECHNOL. 31:354. ALSO IN TOHOKU J. AGRIC. RES. 1954. 5:138-142.

(726) SUGAWARA, S., Y. NAKAMURA, AND T. SHIMOMURA. 1960. TRANSGLUCOSIDATION ACTION OF CRYSTALLINE MOLD MALTASE. II. ACTION OF THE ENZYME ON MALTOSE AND ISOLATION OF TRANSGLUCOSIDATION PRODUCTS BY CARBON COLUMN CHROMATOGRAPHY. BULL. AGRIC. CHEM. SOC. JPN. 24:281-286. ALSO IN CHEM. ABSTR. 1960. 54:24929I.

(727) TAKAHASHI, M., T. SHIMOMURA, AND S. CHIBA. 1969. BIOCHEMICAL STUDIES ON BUCKWHEAT ALPHA-GLUCOSIDASE PART III. TRANSGLUCOSYLATION ACTION OF THE ENZYME AND ISOLATION OF THE REACTION PRODUCTS. AGRIC. BIOL. CHEM. 33:1399-1410.

(728) WEIDENHAGEN, R., AND S. LORENZ. 1957. [PALATINOSE (ALPHA-GLUCOSIDO-6-FRUCTOFURANOSE), A NEW BACTERIAL CONVERSION PRODUCT OF SUCROSE] (IN GERMAN). (LATER THE SUGAR WAS NAMED ISOMALTOSE BY OTHERS.) Z. ZUCKERIND. 7:533-534. ALSO IN CHEM. ABSTR. 1958. 52:6823H.

(729) ------ AND S. LORENZ. 1957. [A NEW BACTERIAL TRANSFORMATION PRODUCT OF SUCROSE] (IN GERMAN). ANGEW. CHEM. 69:641. ALSO IN CHEM. ABSTR. 1959. 53:22231D.

SEE ALSO: 250 253 302 616

IX. The constituent disaccharide structural units of dextrans: nigerose or sakebiose (3-O-α-D-glucopyranosyl-D-glucose) and kojibiose (2-O-α-D-glucopyranosyl-D-glucose)

A. Nigerose or Sakebiose

(730) BARKER, S. A., E. J. BOURNE, AND M. STACEY. 1953. STUDIES OF ASPERGILLUS NIGER. PART I. THE STRUCTURE OF THE POLYGLUCOSAN SYNTHESIZED BY ASPERGILLUS NIGER 152. (ORIGIN OF NAME NIGEROSE.) J. CHEM. SOC. 3084-3090.

(731) ------, E. J. BOURNE, D. M. O'MANT, AND M. STACEY. 1957. STUDIES OF ASPERGILLUS NIGER. PART VI. THE SEPARATION AND STRUCTURES OF OLIGOSACCHARIDES FROM NIGERAN. (METHYL FURANOSIDES OF NIGEROSE.) J. CHEM. SOC. 2448-2454.

(732) HORISBERGER, M., B. A. LEWIS, AND F. SMITH. 1972. STRUCTURE OF A (1,3)-ALPHA-D-GLUCAN (PSEUDONIGERAN) OF ASPERGILLUS NIGER NNRL 326 CELL WALL. (SOURCE OF NIGEROSE AND ITS OLIGOMERS.) CARBOHYDR. RES. 23:183-188.

(733) JOHNSTON, I. R. 1965. THE PARTIAL ACID HYDROLYSIS OF A HIGHLY DEXTROROTATORY FRAGMENT OF THE CELL WALL OF ASPERGILLUS NIGER: ISOLATION OF THE ALPHA-(1,3)-LINKED DEXTRIN SERIES. BIOCHEM. J. 96:659-664.

(734) MANNERS, D. J., AND G. A. MERCER. 1963. OBSERVATIONS ON THE POSSIBLE PRESENCE OF ALPHA-(1,3)-GLUCOSIDIC LINKAGES IN STARCH-TYPE POLYSACCHARIDES. BIOCHEM. J. 89:34P-35P.

(735) MATSUDA, K., G. HIROSHIMA, K. SHIBASAKI, AND K. ASO. 1954. [UNFERMENTABLE SUGARS. XI. THE UNFERMENTABLE DISACCHARIDES IN SAKI AND KOJI EXTRACT. 3. IDENTITY OF SAKEBIOSE WITH NIGEROSE AND Y-SUGAR] (IN JAPANESE). J. FERMENT. TECHNOL. 32:498-501. ALSO IN CHEM. ABSTR. 1955. 49:8554C.

(736) ------ AND T. SEKIGUCHI. 1959. [SYNTHESES OF DISACCHARIDES WITH MERCURIC SALTS. I. SYNTHESIS OF 3-O-ALPHA-D-GLUCOPYRANOSYL-D-GLUCOSE (SAKEBIOSE OR NIGEROSE). 1. REACTION OF 1,2:5,6-DI-O-ISOPROPYLIDENE-D-GLUCOFURANOSE WITH TETRA-O-ACETYL-ALPHA-D-GLUCOPYRANOSYL BROMIDE] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 33:309-313. ALSO IN CHEM. ABSTR. 1963. 58:5774E.

(737) ------ AND T. SEKIGUCHI. 1959. [SYNTHESIS OF DISACCHARIDES BY MERCURIC CYANIDE. IV. SYNTHESIS OF 3-O-ALPHA-D-GLUCOSYL-D-GLUCOSE (NIGEROSE). 2. REACTION OF 1,2,4,6-TETRA-O-ACETYL-BETA-D-GLUCOPYRANOSE AND 2,3,4,6-TETRA-O-ACETYL-ALPHA-D-GLUCOPYRANOSYL BROMIDE] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 33:1156-1158. ALSO IN CHEM. ABSTR. 1963. 59:6495B.

(738) ------, H. WATANABE, AND K. ASO. 1961. [ACETOLYSIS OF POLYSACCHARIDES I. ISOLATION OF NIGEROSE FROM THE ACETOLYZATE OF A DEXTRAN PRODUCED BY LEUCONOSTOC MESENTEROIDES NRRL B-421] (IN JAPANESE). (CORRECT STRAIN DESIGNATION: NRRL B-1290.) NIPPON NOGEI KAGAKU KAISHI 35:1228-1231. ALSO IN TOHOKU J. AGRIC. RES. 12:351-357 AND CHEM. ABSTR. 1962. 57:7590G.

(739) PAZUR, J. H., AND T. BUDOVICH. 1956. THE PREPARATION OF 3-O-ALPHA-D-GLUCOPYRANOSYL-D-GLUCOSE. J. AM. CHEM. SOC. 78:1885-1887.

(740) ------, T. BUDOVICH, AND C. L. TIPTON. 1957. THE ENZYMATIC SYNTHESIS AND DISPROPORTIONATION OF 3-O-ALPHA-D-GLUCOPYRANOSYL-D-GLUCOSE. J. AM. CHEM. SOC. 79:625.

(741) SATO, A., AND H. ONO. 1962. ISOLATION OF 3-O-ALPHA-ISOMALTOSYL-D-GLUCOSE FROM HYDROXOL. CHEM. IND. (LONDON) (34):1536-1537.

(742) STACEY, M., AND J. M. WEBBER. 1962. NIGEROSE (3-O-ALPHA-D-GLUCOPYRANOSYL-D-GLUCOSE): PARTIAL HYDROLYSIS OF NIGERAN. METHODS CARBOHYDR. CHEM. 1:339-341.

(743) TUNG, K. K., AND J. H. NORDIN. 1970. AN ENZYMIC METHOD FOR THE LARGE-SCALE PREPARATION OF NIGEROSE AND NIGERAN OLIGOSACCHARIDES. ANAL. BIOCHEM. 38:164-174.

(744) YAMAUCHI, F., AND K. MATSUDA. 1969. ACETOLYSIS OF POLYSACCHARIDES. PART V. ISOLATION OF TRISACCHARIDES CONTAINING ALPHA-1,3-LINKAGE FROM A DEXTRAN OF LEUCONOSTOC MESENTEROIDES B. (COMPLETE STRAIN DESIGNATION: NRRL B-1290.) AGRIC. BIOL. CHEM. 33:103-109.

SEE ALSO: 604 610 611 755 761 2302

B. Kojibiose

(745) ASO, K., K. SHIBASAKI, AND M. NAKAMURA. 1958. PREPARATION OF KOJIBIOSE. NATURE (LONDON) 182:1303-1304.

(746) BARKER, S. A., E. J. BOURNE, P. M. GRANT, AND M. STACEY. 1956. ENZYMIC SYNTHESIS OF THE ALPHA-1,2-GLUCOSIDIC LINKAGE. NATURE (LONDON) 178:1221-1222.

(747) DICK, W. E., JR., J. E. HODGE, AND G. E. INGLETT. 1974. STRUCTURE-TASTE RELATIONSHIPS IN (1,2)-LINKED DISACCHARIDES. (CHEMICAL SYNTHESIS OF ALPHA-KOJIBIOSE AND ITS OCTAACETATE.) CARBOHYDR. RES. 36:319-329.

(748) DUKE, J. L., N. LITTLE, AND I. J. GOLDSTEIN. 1973. PREPARATION OF CRYSTALLINE ALPHA-KOJIBIOSE OCTAACETATE FROM DEXTRAN B-1299-S: ITS CONVERSION INTO PARA-NITROPHENYL AND PARA-ISOTHIOCYANATOPHENYL BETA-KOJIBIOSIDE. (PROPER TERMINOLOGY IS DEXTRAN B-1299 FRACTION S.) CARBOHYDR. RES. 27:193-198.

(749) ------ AND I. J. GOLDSTEIN. 1974. STRUCTURAL STUDIES OF CAPSULAR POLYSACCHARIDE OF TYPE XII DIPLOCOCCUS PNEUMONIAE. CARBOHYDR. RES. 37:81-88.

(750) GOLDSTEIN, I. J., J. A. CIFONELLI, AND J. L. DUKE. 1974. INTERACTION OF CONCANAVALIN A WITH THE CAPSULAR POLYSACCHARIDE OF PNEUMOCOCCUS TYPE XII AND ISOLATION OF KOJIBIOSE FROM THE POLYSACCHARIDE. BIOCHEMISTRY 13:867-870.

(751) HAQ, S., AND W. J. WHELAN. 1956. CHEMICAL SYNTHESIS OF THE ALPHA-1,2-GLUCOSIDIC LINKAGE. NATURE (LONDON) 178:1222-1223.

(752) MATSUDA, K. 1957. KOJIBIOSE (2-O-ALPHA-D-GLUCOPYRANOSYL-D-GLUCOSE): ISOLATION AND STRUCTURE. CHEMICAL SYNTHESIS. NATURE (LONDON) 180-985.

(753) ------. 1959. [SYNTHESIS OF DISACCHARIDES WITH MERCURIC SALTS. II. SYNTHESIS OF 2-O-ALPHA-D-GLUCOPYRANOSYL-D-GLUCOSE (KOJIBIOSE)] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 33:714-718. ALSO IN CHEM. ABSTR. 1965. 62:7850F.

(754) ------. 1959. [UNFERMENTABLE SUGARS. XIX. DISACCHARIDES IN KOJI EXTRACT AND SAKE. 5. ISOLATION AND IDENTIFICATION OF KOJIBIOSE] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 33:719-723. ALSO IN CHEM. ABSTR. 1965. 62:7070C.

(755) ------, H. WATANABE, K. FUJIMOTO, AND K. ASO. 1961. ISOLATION OF NIGEROSE AND KOJIBIOSE FROM DEXTRANS. NATURE (LONDON) 191:278.

(756) ------, F. FUJIMOTO, AND K. ASO. 1961. [ACETOLYSIS OF POLYSACCHARIDES II. PREPARATION OF KOJIBIOSE BY THE ACETOLYSIS OF A DEXTRAN PRODUCED BY LEUCONOSTOC MESENTEROIDES NRRL B-1299] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 35:1232-1233. ALSO IN TOHOKU J. AGRIC. RES. 12:359-361 AND CHEM. ABSTR. 1962. 58:7590G.

(757) SAKAKIBARA, K., M. TORII, A. MISAKI, AND H. MIYAJI. 1972. ACETOLYSIS OF DEXTRAN NRRL B-1397. PREPARATION OF TRISACCHARIDES CONTAINING (1,2)- AND (1,6)-ALPHA-D-GLUCOSE LINKAGES. CARBOHYDR. RES. 25:443-451.

(758) SATO, A., AND K. ASO. 1957. KOJIBIOSE (2-O-ALPHA-D-GLUCOPYRANOSYL-D-GLUCOSE): ISOLATION AND STRUCTURE. ISOLATION FROM HYDROL. NATURE (LONDON) 180:984-985.

(759) SHIBASAKI, K. 1955. [UNFERMENTABLE SUGARS. XV. TRANSGLUCOSIDATION BY SCHIZOSACCHAROMYCES POMBE. 2. ISOLATION AND IDENTIFICATION OF THE SYNTHESIZED OLIGOSACCHARIDES] (IN JAPANESE). NIPPON NOGEI KAGAKU KAISHI 29:764-769. ALSO IN TOHOKU J. AGRIC. RES. 6:47-56 AND CHEM. ABSTR. 1956. 50:11693D.

(760) TOON, P., P. E. BROWN, AND J. BADDILEY. 1972. THE LIPID-TEICHOIC ACID COMPLEX IN THE CYTOPLASMIC MEMBRANE OF STREPTOCOCCUS FAECALIS N.C.I.B. 8191. (A STRUCTURAL COMPONENT: THE KOJIBIOSYL UNIT.) BIOCHEM. J. 127:399-409.

(761) WATANABE, T., AND K. ASO. 1959. ISOLATION OF KOJIBIOSE FROM HONEY. NATURE (LONDON) 183:1740.

(762) ------ AND K. ASO. 1960. STUDIES ON HONEY. II. ISOLATION OF KOJIBIOSE, NIGEROSE, MALTOSE AND ISOMALTOSE FROM HONEY. TOHOKU J. AGRIC. RES. 11:109-115.

(763) YAMAUCHI, F., AND K. ASO. 1961. CRYSTALLINE ALPHA-KOJIBIOSE. NATURE (LONDON) 189:753.

SEE ALSO: 196 580 610 611

X. Properties of native dextrans

A. General Characterization of Dextrans

(764) ANDRLIK, K. 1895-1896. [ON THE SLIME SEPARATED IN THE OSMOSE AND THE DEXTRAN OBTAINED THEREFORM] (IN GERMAN). Z. ZUCKERIND. BOHMEN. 20:84-97.

(765) BRZOZOWSKA, M. 1961. [PHYSICOCHEMICAL PROPERTIES OF DEXTRAN PRODUCED BY LEUCONOSTOC STRAINS OF DIFFERENT ORIGIN] (IN POLISH). ACTA MICROBIOL. POL. 10:205-209. ALSO IN CHEM. ABSTR. 1962. 57:7711G.

(766) COLIN, H., AND H. BELVAL. 1937. [THE GUM OF SUGAR CANE] (IN FRENCH). COMPT. REND. 204:1010-1012. ALSO IN CHEM. ABSTR. 1937. 31:5202.

(767) ------ AND H. BELVAL. 1938. [ON THE GUM OF SUGAR CANE] (IN FRENCH). SUCR. BELGE. 57:373-374. ALSO IN CHEM. ABSTR. 1939. 33:425.

(768) DAEUMICHEN, P. 1890. [THE ORIGIN AND DEVELOPMENT OF FROG SPAWN IN THE OSMOSE] (IN GERMAN). Z. VER. RUEBENZUCKERIND. 40:701-707.

(769) DAKER, W. D., AND M. STACEY. 1938. INVESTIGATION OF A POLYSACCHARIDE PRODUCED FROM SUCROSE BY BETABACTERIUM VERMIFORME (WARD-MEYER). BIOCHEM. J. 32:1946-1948.

(770) ------ AND M. STACEY. 1939. POLYSACCHARIDES. PART XXX. THE POLYSACCHARIDE PRODUCED FROM SUCROSE BY BETABACTERIUM VERMIFORME (WARD-MAYER). J. CHEM. SOC. 585-587.

(771) FROEMBLING, K., AND F. PATAT. 1957. [ON EXTREMELY LARGE MACROMOLECULES I. CHARACTERIZATION OF DEXTRANS] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 25:41-52.

(772) GROENWALL, A., AND B. INGELMAN. 1944. [INVESTIGATIONS ON DEXTRAN AND ITS BEHAVIOR IN PARENTERAL ADMINISTRATION] (IN GERMAN). ACTA PHYSIOL. SCAND. 7:97-107. ALSO IN CHEM. ABSTR. 1945. 39:4637.

(773) JEANES, A., W. C. HAYNES, C. A. WILHAM, AND OTHERS. 1954. CHARACTERIZATION AND CLASSIFICATION OF DEXTRANS FROM 96 STRAINS OF BACTERIA. J. AM. CHEM. SOC. 76:5041-5052.

(774) ------, W. C. HAYNES, AND C. A. WILHAM. 1956. CHARACTERIZATION OF DEXTRANS FROM FOUR TYPES OF LEUCONOSTOC MESENTEROIDES. J. BACTERIOL. 71:167-173.

(775) ------, C. A. WILHAM, H. M. TSUCHIYA, AND W. C. HAYNES. 1957. PROPERTIES OF DEXTRANS ISOLATED FROM WHOLE CULTURES AT VARIOUS STAGES OF INCUBATION. ARCH. BIOCHEM. BIOPHYS. 71:293-302.

(776) KANIUGA, B. 1955. [STUDIES ON THE MOLECULAR STRUCTURE OF NATURAL DEXTRAN] (IN POLISH). ACTA BIOCHIM. POL. 2(1):59-71. (ENGLISH TRANS. IN SELECTED ARTICLES, OTS 60-21570:19-31, 1962.) ALSO IN CHEM. ABSTR. 1957. 51:12186E.

(777) ------. 1958. [PHYSICO-CHEMICAL CHARACTERISTICS OF DEXTRANS FROM VARIOUS LEUCONOSTOC SPECIES] (IN POLISH). PR. INST. LAB. BADA. PREZM. ROLNEGO SPOZYW. 8(2):105-111. (ENGLISH TRANS. IN SELECTED ARTICLES, OTS 60-21570:11-18, 1962.) ALSO IN CHEM. ABSTR. 1958. 52:18640G.

(778) STACEY, M., AND F. R. YOUD. 1943. A NOTE ON THE DEXTRAN PRODUCED FROM SUCROSE BY BETACOCCUS ARABINOSACEOUS HAEMYOLYTICUS. BIOCHEM. J. 32:1943-1945.

SEE ALSO: 11 16 21 THROUGH 23 61 130 131 148 545 584 2327

B. Chemical Properties

Behavior under chemical treatment.

(779) ANTONINI, E., L. BELLELLI, M. R. BRUZZESI, AND OTHERS. 1964. STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. I. PROPERTIES OF NATIVE DEXTRAN IN DIFFERENT SOLVENTS. BIOPOLYMERS 2:27-34.

(780) ------, L. BELLELLI, M. L. BONACCI, AND OTHERS. 1964. STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. II. ACID HYDROLYSIS OF NATIVE DEXTRAN. BIOPOLYMERS 2:35-42.

(781) BARKER, S. A., M. STACEY, AND G. ZWEIFEL. 1957. THE SEPARATION OF NEUTRAL POLYSACCHARIDES. CHEM. IND. (LONDON) (11):330.

(782) CARLQVIST, B. 1948. HYDROLYSIS OF GLYCOGEN WITH HYDROCHLORIC ACID. (DEXTRAN INCLUDED.) ACTA CHEM. SCAND. 2:759-769.

(783) COLIN, H., AND H. BELVAL. 1940. [CONCERNING THE CONSTITUTION OF DEXTRAN] (IN FRENCH). COMPT. REND. 210:517-520. ALSO IN CHEM. ABSTR. 1940. 34:4058.

(784) HERP, A., T. RICKARDS, G. MATSUMURA, AND OTHERS. 1967. DEPOLYMERIZATION OF SOME POLYSACCHARIDES AND SYNTHETIC POLYMERS BY L-ASCORBIC ACID. CARBOHYDR. RES. 4:63-71.

(785) INGLES, D. L. 1972. STUDIES OF OXIDATION BY FENTON'S REAGENT USING REDOX TITRATION. III. REACTIONS WITH CARBOHYDRATES AND POLYHYDROXY COMPOUNDS. AUST. J. CHEM. 25:105-108.

(786) ISHAK, M. F., AND T. J. PAINTER. 1971. FORMATION OF INTER-RESIDUE HEMIACETALS DURING THE OXIDATION OF POLYSACCHARIDES BY PERIODATE ION. ACTA CHEM. SCAND. 25:3875-3877.

(787) KOBAYASHI, T., AND Y. TSUKANO. 1951. [STUDIES ON DEXTRAN. PART 2. ON THE VELOCITY OF ACID HYDROLYSIS] (IN JAPANESE, ENGLISH SUBTITLE AND SUMMARY). NIPPON NOGEI KAGAKU KAISHI 25:424-426. ALSO IN CHEM. ABSTR. 1952. 46:10226I.

(788) LAUNER, H. F., AND Y. TOMIMATSU. 1961. FAILURE OF ALKALINE METHODS TO MEASURE DEGREE OF POLYMERIZATION OF CARBOHYDRATES: COMPARISON WITH CHLORITE METHOD. ANAL. CHEM. 33:79-83.

(789) LEVI, I., AND E. LOZINSKI. 1955. DEPOLYMERIZATION OF DEXTRAN BY HYDROGEN PEROXIDE. CAN. J. BIOCHEM. PHYSIOL. 33:448-452.

(790) MOHAY, J., AND GY. KEDVESSY. 1963. [INCOMPATIBILITIES OF DISSOLVED DEXTRAN] (IN HUNGARIAN). GYOGYSZERESZET 7:257-259. ALSO IN CHEM. ABSTR. 1964. 60:2724B.

(791) MONDOVI, B., A. M. WOLF, P. TURINI, AND A. ROSSI-FANELLI. 1964. STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES NOTE V. STABILITY TO HEAT OF DEXTRAN IN AQUEOUS SOLUTION. ITAL. J. BIOCHEM. 13(6):401-405.

(792) PALMSTIERNA, H., J. E. SCOTT, AND S. GARDELL. 1957. THE PRECIPITATION OF NEUTRAL POLYSACCHARIDES BY CATIONIC DETERGENTS. ACTA CHEM. SCAND. 11:1792-1793.

(793) RENFREW, A. G., AND L. H. CRETCHER. 1949. PARTIALLY HYDROLYZED DEXTRAN. J. AM. PHARM. ASSOC. SCI. ED. 38:177-179.

(794) SWANSON, M. A., AND C. F. CORI. 1948. STUDIES ON THE STRUCTURE OF POLYSACCHARIDES. I. ACID HYDROLYSIS OF STARCH-LIKE POLYSACCHARIDES. J. BIOL. CHEM. 172:797-804.

(795) SZETLI, J. 1965. THE ACID HYDROLYSIS OF DEXTRAN. ACTA CHIM. ACAD. SCI. HUNG. 45(1-2):153-162. ALSO IN CHEM. ABSTR. 1965. 63:18432F.

(796) ZAKRZEWSKI, K., J. KRYSIAK, K. MURAWSKI, AND OTHERS. 1954. MOLECULAR STRUCTURE OF THE PRODUCTS OF DEXTRAN HYDROLYSIS. ACTA BIOCHIM. POL. 1:27-45. ALSO IN CHEM. ABSTR. 1955. 49:4053B.

SEE ALSO: 584 878 921 1008 1167

C. Physicochemical Properties

Results of physicochemical treatment, and measurements.

(797) ALLGEN, L. G., AND S. ROSWALL. 1954. A DIELECTRIC STUDY OF CARBOXYMETHYL CELLULOSE IN AQUEOUS SOLUTION. J. POLYM. SCI. 12:229-236.

(798) AROND, L. H., AND H. P. FRANK. 1954. MOLECULAR WEIGHT, MOLECULAR WEIGHT DISTRIBUTION AND MOLECULAR SIZE OF A NATIVE DEXTRAN. J. PHYS. CHEM. 58:953-957.

(799) BARHAM, P. J., E. D. T. ATKINS, AND I. A. NIEDUSZYNSKI. 1974. SPHERULITIC CRYSTALLIZATION IN BIOPOLYMERS. POLYMER 15:762-766.

(800) BARKER, S. A., E. J. BOURNE, M. STACEY, AND D. H. WHIFFEN. 1953. INFRA-RED ABSORPTION SPECTRA OF DEXTRAN AND OTHER POLYGLUCOSANS. CHEM. IND. (LONDON) (9):196-197.

(801) ------, E. J. BOURNE, M. STACEY, AND D. H. WHIFFEN. 1954. INFRA-RED SPECTRA OF CARBOHYDRATES. PART I. SOME DERIVATIVES OF D-GLUCOPYRANOSE. J. CHEM. SOC. 171-176.

(802) BERG, H. 1956. [PHYSICOCHEMICAL STUDIES OF DEXTRAN. I. DEXTRAN AS MAXIMAL DAMPER (EXTINGUISHER) IN POLAROGRAPHY] (IN GERMAN). PHARMAZIE 11:239-242. ALSO IN CHEM. ABSTR. 1957. 51:7104E.

(803) BERMES, E. W., JR., AND H. J. MCDONALD. 1956. ELECTRO-OSMOSIS ON GLASS FIBER FILTER PAPER. BIOCHIM. BIOPHYS. ACTA 20:416-417.

(804) BONTOUX, J., A. DAUPLAN, AND R. MARIGNAN. 1969. [STABILIZATION OF MINERAL COLLOIDS. EFFECT OF THE MOLECULAR WEIGHT OF THE STABILIZER, MICELLAR DIMENSIONS, AND TESTS FOR EVALUATING THE PROTECTIVE LAYER] (IN FRENCH). J. CHIM. PHYS. PHYS. CHIM. BIOL. ALSO IN CHEM. ABSTR. 1970. 72:6519J.

(805) BORUCH, M. 1974. [EFFECT OF CALCIUM COMPLEXES ON THE POLARIZATION OF STARCH, AND SEVERAL SUGARS] (IN POLISH). (DEXTRAN AND ITS HYDROLYZATES.) ZESZ. PROBL. POSTEPOW NAUK ROLN. 159:205-210. ALSO IN CHEM. ABSTR. 1975. 83:10644R.

(806) BURCHARD, W., AND B. PFANNEMUELLER. 1969. [MOLECULAR WEIGHTS OF DEXTRAN AND DEXTRAN TRICARBANILATES FROM BACTERIA LEUCONOSTOC MESENTEROIDES B 512] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 121:18-32.

(807) BURKET, S. C., AND E. H. MELVIN. 1952. AN OBSERVATION ON THE INFRARED ABSORPTION SPECTRUM OF DEXTRAN. SCIENCE 115:516-517.

(808) CASU, B., AND M. REGGIANI. 1966. CONFORMATION OF AMYLOSE AND ITS DERIVED PRODUCTS I. INFRARED SPECTRA OF AMYLOSE AND ITS OLIGOMERS IN THE AMORPHOUS SOLID PHASE AND IN SOLUTION. (DEXTRANS INCLUDED.) STAERKE 18:218-229.

(809) ------ AND M. REGGIANI, G. G. GALLO, AND A. VIGEVANI. 1968. HYDROGEN-DEUTERIUM EXCHANGE OF GLUCOSE AND POLYGLUCOSES IN DIMETHYL SULPHOXIDE SOLUTION. CHEM. SOC. SPEC. PUBL. 23:217-226. ALSO IN CHEM. ABSTR. 1969. 70:11897U.

(810) CHIANCONE, E. 1966. STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. XI. SEDIMENTATION OF MIXTURES OF DEXTRANS OF DIFFERENT MOLECULAR WEIGHTS. ITAL. J. BIOCHEM. 15:292-300.

(811) CIFERRI, A., G. SCHIPPA, G. TORRACA, AND R. TURRIZIANI. 1956. [CHARACTERIZATION OF DEXTRAN] (IN ITALIAN). ANN. CHIM. 46:988-1000. ALSO IN CHEM. ABSTR. 1957. 51:8511C.

(812) COLSON, P., H. J. JENNINGS, AND I. C. P. SMITH. 1974. COMPOSITION, SEQUENCE, AND CONFORMATION OF POLYMERS AND OLIGOMERS OF GLUCOSE AS REVEALED BY CARBON-13 NUCLEAR MAGNETIC RESONANCE. J. AM. CHEM. SOC. 96:8081-8087.

(813) DEWAELE, A. 1945. THE USE OF DEFLOCCULATORS IN DUPLICATING STENCIL TISSUE MANUFACTURE. CHEM. IND. (LONDON) (32):253.

(814) ------. 1946. A NON-NEWTONIAN FLUID SHOWING MARKED INVERSE THIXOTHROPY. CHEM. IND. (LONDON) (48):431.

(815) EBERT, K. H. 1967. [ON THE STATE OF NATIVE DEXTRANS IN SOLUTION ASSUMING A HELIX CONFORMATION] (IN GERMAN). MONATSCH. CHEM. 98(3):1128-1137. ALSO IN CHEM. ABSTR. 1967. 67:79023Z.

(816) ------ AND J. RICHTER. 1967. [WILZBACH-LABELING OF CARBOHYDRATES] (IN GERMAN). Z. NATURFORSCH. B, 22(7):788-789. ALSO IN CHEM. ABSTR. 1967. 67:117120P.

(817) ELIAS, H. G. 1958. [CONCERNING EXTREMELY LARGE MACROMOLECULES. III. LIGHT SCATTERING, EXTINCTION AND MULTIPLE SCATTERING OF DEXTRAN SOLUTIONS] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 27:192-217. ALSO IN CHEM. ABSTR. 1958. 52:17899B.

(818) ------. 1959. [CONCERNING EXTREMELY LARGE MACROMOLECULES. IV. ULTRACENTRIFUGE- AND DIFFUSION MEASUREMENTS ON NON-NEWTONIAN SOLUTIONS OF NATIVE DEXTRAN] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 33:166-180. ALSO IN CHEM. ABSTR. 1960. 54:6254I.

(819) ------. 1959. [PRESSURE AND CONCENTRATION DEPENDENCE OF SEDIMENTATION COEFFICIENTS] (IN GERMAN). MAKROMOL. CHEM. 29:30-47.

(820) EVVA, F. 1954. [LIGHT SCATTERING OF SOLVATED COLLOIDAL PARTICLES. II. THE EFFECT OF THE CHARGE ON THE SILVER CHLORIDE PARTICLES ON THE SCREENING ACTION OF THE PROTECTIVE COLLOID LAYER IN SILVER CHLORIDE SOLS] (IN GERMAN). KOLLOID Z. 135:136-140. ALSO IN CHEM. ABSTR. 1954. 48:8623D.

(821) FLYNN, J. H., L. A. WALL, AND W. L. MORROW. 1967. IRRADIATION OF DEXTRAN AND ITS AQUEOUS SOLUTIONS WITH COBALT-60 GAMMA RAYS. J. RES. NAT. BUR. STAND. 71A:25-31.

(822) GIANTURCO, F. A., P. CERLETTI, AND P. TURINI. 1966. [STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. VII. INFRARED SPECTROSCOPY OF NATIVE AND CLINICAL DEXTRAN] (IN ITALIAN, ENGLISH SUMMARY). GAZZ. CHIM. ITAL. 96:566-573. ALSO IN CHEM. ABSTR. 1966. 65:9942A.

(823) ------, AND P. CERLETTI. 1966. [STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. VIII. CRYSTALLINITY OF DEXTRAN AND ITS DEGRADATION PRODUCTS] (IN ITALIAN, ENGLISH SUMMARY). (PARTIALLY DEPOLYMERIZED DEXTRAN.) GAZZ. CHIM. ITAL. 96:574-577. ALSO IN CHEM. ABSTR. 1966. 65:9942B.

(824) GLASS, C. A. 1965. PROTON MAGNETIC RESONANCE SPECTRA OF D-GLUCOPYRANOSE POLYMERS. CAN. J. CHEM. 43:2652-2659.

(825) GRANATH, K. A., AND P. O. KINELL. 1961. STRUCTURAL CHANGES INDUCED IN SOLID DEXTRAN BY IRRADIATION WITH GAMMA RAYS. ACTA CHEM. SCAND. 15:141-153.

(826) GREEN, J. H. S. 1961. DIMENSIONS OF BRANCHED DEXTRANS IN SOLUTION. CHEM. IND. (LONDON) (27):1036-1037.

(827) HARTMANN, J., AND F. PATAT. 1957. [ON EXTREMELY LARGE MACROMOLECULES II. THE RHEOLOGICAL BEHAVIOR OF SOLUTIONS OF HIGH MOLECULAR WEIGHT DEXTRAN] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 25:53-70.

(828) HAUG, A., O. SMIDSROED. 1968. THE SOLUBILITY OF POLYSACCHARIDES IN SALT SOLUTIONS. CHEM. SOC. SPEC. PUBL. 23:273-282.

(829) HEYN, A. N. J. 1974. THE INFRARED ABSORPTION SPECTRUM OF DEXTRAN AND ITS BOUND WATER. BIOPOLYMERS 13:475-506.

(830) INGELMAN, B., AND K. SIEGBAHN. 1944. DEXTRAN AND LEVAN MOLECULES STUDIED WITH THE ELECTRON MICROSCOPE. NATURE (LONDON) 154:237-238.

(831) ------ AND K. SIEGBAHN. 1944. AN ELECTRON MICROSCOPIC STUDY OF DEXTRAN MOLECULES. ARK. KEMI MINERAL. GEOL. 18B(1):1-6. ALSO IN CHEM. ABSTR. 1945. 39:3190.

(832) JEANES, A., N. C. SCHIELTZ, AND C. A. WILHAM. 1948. MOLECULAR ASSOCIATION IN DEXTRAN AND IN BRANCHED AMYLACEOUS CARBOHYDRATES. J. BIOL. CHEM. 176:617-627.

(833) KENNEDY, J. F., S. A. BARKER, AND C. A. WHITE. 1974. THE SELECTIVE ADSORPTION OF POLYSACCHARIDES ON POLYAROMATIC SURFACES. CARBOHYDR. RES. 38:13-23.

(834) KINELL, P. O., K. A. GRANATH, AND T. VANNGARD. AN ELECTRON SPIN RESONANCE STUDY OF GAMMA-IRRADIATED DEXTRAN. ARK. FYS. 13:272.

(835) ------, L. A. LUND, AND T. VANNGARD. 1964. AN ELECTRON SPIN RESONANCE STUDX OF GAMMA-IRRADIATED SOLID DEXTRAN. ARK. KEMI 23:193-203. ALSO IN CHEM. ABSTR. 1965. 62:8546H.

(836) KOBAYASHI, T., AND Y. TSUKANO. 1952. [STUDIES ON DEXTRAN. PART 1. THE PREPARATION AND PROPERTIES OF DEXTRAN] (IN JAPANESE, ENGLISH SUBTITLE AND SUMMARY). NIPPON NOGEI KOGAKU KAISHI 25:421-423. ALSO IN CHEM. ABSTR. 1952. 46:10226H.

(837) KOCH, C. 1957. [PERIODIC PHENOMENA IN DRYING DROPS OF HIGH-MOLECULAR WEIGHT FLUIDS] (IN GERMAN). KOLLOID Z. 150:80-83. ALSO IN CHEM. ABSTR. 1957. 51:10179C.

(838) ------. 1957. [DOUBLETS AND SIMILAR PHENOMENA IN DRIED DROPS OF HIGH MOLECULAR-WEIGHT LIQUIDS] (IN GERMAN). (DEXTRAN, POLYVINYLPYRROLIDON.) KOLLOID Z. 151:62-66. ALSO IN CHEM. ABSTR. 1957. 51:14372G.

(839) ------. 1958. SURFACE FILMS ON HIGH-MOLECULAR-WEIGHT LIQUIDS (MODEL TESTS WITH POLY(VINYLPYRROLIDINONE) (PVP) AND DEXTRAN SOLUTIONS WITH ADDITION OF TIN SALTS). MIKROSKOPIE 13:233-239. ALSO IN CHEM. ABSTR. 1962. 56:6684F.

(840) KWEI, K-P. S. 1962. CHAIN TRANSFER CONSTANT OF VINYLPYRROLIDONE WITH DEXTRAN. J. PHYS. CHEM. 66:828-829.

(841) LAMBERTS, B. L., T. S. MEYER, AND W. ROZMAN. 1974. INFRARED SPECTROSCOPIC STUDIES OF GLUCANS FROM CARIOGENIC STREPTOCOCCI [ABSTRACT 472]. J. DENT. RES. 53:172.

(842) ------ AND I. C. P. SMITH. 1976. COMPOSITION AND STRUCTURE OF STREPTOCOCCAL GLUCANS AS REVEALED BY CARBON-13 NUCLEAR MAGNETIC RESONANCE [ABSTRACT 850]. J. DENT. RES. (SPECIAL ISSUE B) 55:B274.

(843) ------, T. S. MEYER, AND L. G. SIMONSON. 1975. INVESTIGATION OF POSSIBLE SOLVENTS FOR EXTRACELLULAR POLYSACCHARIDES FROM STREPTOCOCCUS MUTANS AND STREPTOCOCCUS SANGUIS. J. DENT. RES. 54:857-866.

(844) LAURENT, T. C., AND H. PERSSON. 1963. ON THE INTERACTION BETWEEN POLYSACCHARIDES AND OTHER MACROMOLECULES. III. THE USE OF HYALURONIC ACID FOR THE SEPARATION OF MACROMOLECULES IN THE ULTRACENTRIFUGE. BIOCHIM. BIOPHYS. ACTA 78:360-366.

(845) LUECKE, H. 1964. [THE ULTRASONIC DEGRADATION OF DEXTRAN] (IN GERMAN). ABH. DTSH. AKAD. WISS. BERLIN KL. MED. 6:109-116. ALSO IN CHEM. ABSTR. 1965. 63:5937H.

(846) MACMILLAN, D., AND E. H. MELVIN. 1948. ULTRAVIOLET LIGHT-ABSORPTION OF ALKALI-TREATED SOLUTIONS OF CARBOHYDRATES. (DATA ON DEXTRAN NOT INCLUDED. UNPUBLISHED RESULTS ON NRRL B-512 DEXTRAN SHOWED THE NATIVE WAS LESS REACTIVE THAN AMYLOPECTIN AND FRACTIONS OF THE ACID HYDROLYZED WERE ESSENTIALLY INERT.) SCIENCE 107:447-449.

(847) MEYER, T. S., B. L. LAMBERTS, AND L. G. SIMONSON. 1973. OPTICAL ROTATION STUDIES OF EXTRACELLULAR POLYSACCHARIDES FROM CARIOGENIC STREPTOCOCCI. [AN ABSTRACT.] J. DENT. RES. (SPECIAL ISSUE) 52:90.

(848) MOODY, G. J., AND G. O. PHILLIPS. 1959. ACTION OF IONIZING RADIATIONS ON SOLID CARBOHYDRATES. CHEM. IND. (LONDON) (40):1247-1248.

(849) MORITA, H. 1956. THE DIFFERENTIAL THERMAL PROPERTIES OF BACTERIAL DEXTRANS. J. AM. CHEM. SOC. 78:1397-1399.

(850) ------. 1956. CHARACTERIZATION OF STARCH AND RELATED POLYSACCHARIDES BY DIFFERENTIAL THERMAL ANALYSIS. ANAL. CHEM. 28:64-67.

(851) NADZIAKIEWICZ, H. C. 1968. [OPTICAL ROTATORY STUDIES OF SOME POLYSACCHARIDES. II. OPTICAL ROTATORY DISPERSION OF DEXTRAN SOLUTIONS] (IN POLISH). POLIMERY 13(12):553-554. ALSO IN CHEM. ABSTR. 1969. 70:116427U.

(852) NEELY, W. B. 1960. DEXTRAN: STRUCTURE AND SYNTHESIS. (PHYSICAL STUDIES INCLUDED.) ADV. CARBOHYDR. CHEM. 15:341-369.

(853) ------. 1960. APPLICATIONS OF OPTICAL ROTATORY DISPERSION STUDIES TO CONFORMATIONAL ANALYSIS OF POLYSACCHARIDES IN SOLUTION [ABSTRACT 43]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 138:15D-16D.

(854) OEHME, F. 1955. THE MEASUREMENT OF THE DIELECTRIC CONSTANT OF POWDERS WITH ADSORPTIVE POWER. Z. NATURFORSCH. 10B:725-727. ALSO IN CHEM. ABSTR. 1956. 50:16223F.

(855) ------. 1956. [PHYSIOCHEMICAL STUDIES OF DEXTRAN. II. MOISTURE DETERMINATION BY MEASUREMENT OF DIELECTRIC CONSTANTS] (IN GERMAN). PHARMAZIE 11:335-337. ALSO IN CHEM. ABSTR. 1957. 51:7104E.

(856) OGSTON, A. G., AND E. F. WOODS. 1953. MOLECULAR CONFIGURATION OF DEXTRANS IN AQUEOUS SOLUTION. NATURE (LONDON) 171:221-222.

(857) PASIKA, W. M., AND L. H. CRAGG. 1962. THE VISCOSITY BEHAVIOR OF LINEAR AND BRANCHED DEXTRAN SULFATES. J. POLYM. SCI. 57:301-310.

(858) ------ AND L. H. CRAGG. 1965. VISCOSITY BEHAVIOR OF BRANCHED AND LINEAR POTASSIUM CARBOXYMETHYL DEXTRANS. J. POLYM. SCI. PART A, 3:1391-1399.

(859) PATAT, F., AND J. HARTMANN. 1954. [DETERMINATION OF VISCOSITY-MOLECULAR WEIGHT RELATIONSHIPS IN STRUCTURALLY VISCOUS HIGH POLYMER SOLUTIONS] (IN GERMAN). NATURWISSENSCHAFTEN 41:526.

(860) ------ AND J. HARTMANN. 1956. [ON PROBLEMS OF DETERMINING VISCOSITY NUMBER IN STRUCTURALLY VISCOUS SOLUTIONS] (IN GERMAN, ENGLISH SUMMARY). (VISCOSITY MEASUREMENTS ON NATIVE DEXTRANS.) MAKROMOL. CHEM. 18-19:422-430.

(861) ------ AND E. BURGTORF. 1962. [RHEOLOGICAL PROPERTIES OF EXTREMELY LARGE MACROMOLECULES] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 52:125-132.

(862) ------, V. H. P. ZINGSHEIM, AND L. BACHMANN. 1971. [ELECTROMICROSCOPIC INVESTIGATION ON MOLECULES OF HIGH POLYMERS] (IN GERMAN, ENGLISH SUMMARY). KOLLOID Z. Z. POLYM. 246:561-568.

(863) PAUTARD, F. G. 1953. PHOTO-INSOLUBILIZATION OF DEXTRAN. NATURE (LONDON) 171:302-303.

(864) PHILLIPS, G. O., AND G. J. MOODY. 1958. RADIATION CHEMISTRY OF CARBOHYDRATES. PART II. IRRADIATION OF AQUEOUS SOLUTIONS OF DEXTRAN WITH GAMMA RADIATION. J. CHEM. SOC. 3534-3539.

(865) ------, G. L. MATTOK, AND G. J. MOODY. 1959. ACTION OF IONIZING RADIATIONS ON AQUEOUS SOLUTIONS OF CARBOHYDRATES. PROC. U.N. INT. CONF. PEACEFUL USES AT. ENERGY 2ND. 29:92-98. ALSO IN CHEM. ABSTR. 1960. 54:19113B.

(866) PRICE, F. P., W. D. BELLAMY, AND E. J. LAWTON. 1954. EFFECT OF HIGH VELOCITY ELECTRONS ON DRY DEXTRAN. J. PHYS. CHEM. 58:821-824.

(867) PTITSYN, O. B. 1959. [HYDRODYNAMICS OF POLYMER SOLUTIONS. I. DIFFUSION AND SEDIMENTATION OF BRANCHED MACROMOLECULES] (IN RUSSIAN). ZH. TEKH. FIZ. 29:75-93. ALSO IN CHEM. ABSTR. 1959. 53:13730B.

(868) RAO, V. S. R., AND J. F. FOSTER. 1963. DEPOLARIZATION OF SCATTERED LIGHT IN SOLUTIONS OF LINEAR AND BRANCHED POLYSACCHARIDES. J. POLYM. SCI. PART A, 1:289-300.

(869) ------ AND J. F. FOSTER. 1965. STUDIES ON THE CONFORMATION OF CARBOXYMETHYL AMYLOSE IN AQUEOUS SOLUTIONS. (DEXTRAN INCLUDED.) BIOPOLYMERS 3:185-193.

(870) REES, D. A., AND W. E. SCOTT. 1971. POLYSACCHARIDE CONFORMATION. PART VI. COMPUTER MODEL-BUILDING FOR LINEAR AND BRANCHED PYRANOGLYCANS. CORRELATIONS WITH BIOLOGICAL FUNCTION. PRELIMINARY ASSESSMENT OF INTER-RESIDUE FORCES IN AQUEOUS SOLUTION. FURTHER INTERPRETATION OF OPTICAL ROTATION IN TERMS OF CHAIN CONFORMATION. J. CHEM. SOC. B, 3:469-479.

(871) RICKETTS, C. R., AND C. E. ROWE. 1954. THE EFFECT OF GAMMA-RAYS UPON DEXTRAN. CHEM. IND. (LONDON) (7):189-190.

(872) ROBINSON, N. 1960. MOLECULAR SIZE AND SHAPE. A REVIEW OF THE LIGHT-SCATTERING METHOD APPLIED TO SOME IMPORTANT BIOLOGICAL AND OTHER MACROMOLECULES. II. J. PHARM. PHARMACOL. 12:193-218. ALSO IN CHEM. ABSTR. 1960. 54:17794A.

(873) SAWARDEKER, J. S., J. H. SLONEKER, AND R. J. DIMLER. 1965. DETECTION AND QUANTITATIVE DETERMINATION OF ANHYDROGLYCOSES BY GAS CHROMATOGRAPHY. (ANALYSIS OF DEXTRAN PYROLYZATES.) J. CHROMATOGR. 20:260-265.

(874) SEELY, T. 1967. HYDRODYNAMICS OF A POROUS SPHERE MOLECULE. J. POLYM. SCI. PART A-1, 5:3029-3041.

(875) SENTI, F. R., N. N. HELLMAN, N. H. LUDWIG, AND OTHERS. 1955. VISCOSITY, SEDIMENTATION, AND LIGHT-SCATTERING PROPERTIES OF FRACTIONS OF AN ACID-HYDROLYZED DEXTRAN. J. POLYM. SCI. 17:527-546.

(876) SHALAEVA, L. F. 1960. [DIFFUSION OF DEXTRAN FRACTIONS IN WATER] (IN RUSSIAN). VYSOKOMOL. SOEDIN. 2:1137-1143. ALSO IN CHEM. ABSTR. 1961. 55:24166E.

(877) SHEN, K. P., AND F. R. EIRICH. 1961. GRAFT COPOLYMERS OF VINYL PYRROLIDONE ON DEXTRAN. J. POLYM. SCI. 53:81-85.

(878) SMIDSROED, O., A. HAUG, AND B. LARSEN. 1967. OXIDATIVE-REDUCTIVE DEPOLYMERIZATION: A NOTE ON THE COMPARISON OF DEGRADATION RATES OF DIFFERENT POLYMERS BY VISCOSITY MEASUREMENTS. CARBOHYDR. RES. 5:482-485.

(879) ------ AND A. HAUG. 1967. PRECIPITATION OF ACIDIC POLYSACCHARIDES BY SALTS IN ETHANOL-WATER MIXTURES. J. POLYM. SCI, PART C, 16:1587-1598.

(880) STONE, A. L. 1969. CONFORMATION OF HEXOSE POLYSACCHARIDES IN SOLUTION. IN S. N. TIMASHEFF AND G. D. FASMAN, EDS., STRUCTURE AND STABILITY OF BIOLOGICAL MACROMOLECULES, PP. 353-363. MARCEL DEKKER, INC., NEW YORK.

(881) SZCZESNIAK, A. S., AND E. FARKAS. 1962. OBJECTIVE CHARACTERIZATION OF THE MOUTHFEEL OF GUM SOLUTIONS. J. FOOD SCI. 27:381-385.

(882) TACHIBANA, T. 1954. MECHANISM OF AGGREGATION OF DISPERSED PARTICLES BY LINEAR POLYMERS. SAIBO KAGAKU SINPOJUMU 3:27-33. ALSO IN CHEM. ABSTR. 1959. 53:15712B.

(883) TAYLOR, N. W., H. F. ZOBEL, N. N. HELLMAN, AND F. R. SENTI. 1959. EFFECT OF STRUCTURE AND CRYSTALLINITY ON WATER SORPTION OF DEXTRANS. J. PHYS. CHEM. 63:599-603.

(884) ------, J. E. CLUSKEY, AND F. R. SENTI. 1961. WATER SORPTION BY DEXTRANS AND WHEAT STARCH AT HIGH HUMIDITIES. J. PHYS. CHEM. 65:1810-1816.

(885) TEXTER, J. A., R. KELLERMAN, AND K. KLIER. 1975. WATER SORPTION IN A DEXTRAN GEL. CARBOHYDR. RES. 41:191-210.

(886) TOLSTOGUZOV, V. B., A. I. MZHEL'SKII, AND V. YA. GULOV. 1974. DEFORMATION OF EMULSION DROPLETS IN FLOW. COLLOID POLYM. SCI. 252(2): 124-132. ALSO IN CHEM. ABSTR. 1975. 81:41794C.

(887) TOMIMATSU, Y., L. VITELLO, AND K. FONG. 1968. COMPARISON OF REFLECTION EFFECTS IN THE BRICE-TYPE SOFICA LIGHT SCATTERING PHOTOMETERS. J. COLLOID INTERFACE SCI. 27:573-580.

(888) TREIBLER, E., AND W. FELBINGER. 1953. [THE LIGHT ABSORPTION OF CELLULOSE DERIVATIVES III. THE UV-ABSORPTION SPECTRUM OF CELLULOSE, METHYL- AND CARBOXYMETHYL CELLULOSE, DEXTRAN AND CELLOBIOSE] (IN GERMAN). PAPIER 7:13-17. ALSO IN CHEM. ABSTR. 1953. 47:6651.

(889) ------ AND H. C. NADZIAKIEWICZ. 1963. NEW CONTRIBUTIONS TO THE STATE OF SOLUTION OF VISCOSE. GEL PARTICLE COUNTING AND OPTICAL ROTATORY DISPERSION STUDIES ON VISCOSE. (DEXTRAN SOLUTIONS INCLUDED.) J. POLYM. SCI. PART C, 2:357-376.

(890) VAN OENE, H., AND L. H. CRAGG. 1962. SHEAR DEPENDENCE IN SOLUTIONS OF FRACTIONATED DEXTRAN: A VARIABLE-SHEAR CAPILLARY VISCOMETER FOR USE WITH AQUEOUS SOLUTIONS. J. POLYM. SCI. 57:175-185.

(891) VASKO, P. D., J. BLACKWELL, AND J. L. KOENIG. 1971. INFRARED AND RAMAN SPECTROSCOPY OF CARBOHYDRATES. PART I. IDENTIFICATION OF O-H AND C-H-RELATED VIBRATIONAL MODES FOR D-GLUCOSE, MALTOSE CELLOBIOSE, AND DEXTRAN BY DEUTERIUM-SUBSTITUTION METHODS. CARBOHYDR. RES. 19:297-310.

(892) WALES, M., P. A. MARSHALL, S. ROTHMAN, AND S. G. WEISSBERG. 1953. APPLICATION OF VISCOSITY METHODS TO THE STUDY OF BRANCHING IN POLYSACCHARIDES. ANN. N.Y. ACAD. SCI. 57:353-359.

(893) WHIFFEN, D. H. 1957. APPLICATIONS OF INFRARED SPECTROSCOPY: SOME APPLICATIONS OF INFRARED SPECTROSCOPY TO CARBOHYDRATE CHEMISTRY. CHEM. IND. (LONDON) (5):129-131.

(894) WILHAM, C. A., R. J. DIMLER, AND F. R. SENTI. 1959. NOTE ON THE EFFECTS OF NEUTRAL POLYSACCHARIDES ON DOUGH MIXING PROPERTIES. CEREAL CHEM. 36:558-563.

(895) WOLFF, I. A., P. R. WATSON, AND C. E. RIST. 1952. ROTATORY DISPERSION OF AMYLACEOUS POLYSACCHARIDES AND THEIR TRIESTERS. J. AM. CHEM. SOC. 74:3064-3066.

(896) YANG, J. T., AND J. F. FOSTER. 1955. STREAMING BIREFRINGENCE BEHAVIOR OF DEXTRANS PRODUCED BY LEUCONOSTOC MESENTEROIDES. J. POLYM. SCI. 18:1-15.

(897) ZHBANKOV, R. G., N. V. IVANOVA, K. M. GRUSHETSKII, AND OTHERS. 1968. [INFRARED SPECTRA OF CARBOHYDRATE POLYMERS AND THEIR STRUCTURAL FEATURES] (IN RUSSIAN). SPEKTROSK. POLIM. SB. DOKL. VSES. SIMP. 26-38. ALSO IN CHEM. ABSTR. 1969. 71:31614Y.

SEE ALSO: 86 387 389 411 414 416
425 428 440 447 448 500 556 575
772 799 931 934 949 952 971 1057
1526 1537 1539 1540 2332 2338 2349 2403
2405 2417 2434 2437 2450 2504 2510 2512

XI. Chemical and physical properties of clinical sized and other dextrans having molecular weight lower than native dextrans

A. Clinical Sized

Chemical and physicochemical properties of the dry powder and of solutions for infusion.

(898) ALLERHAND, A., R. F. CHILDERS, R. A. GOODMAN, AND OTHERS. 1973. INCREASED SENSITIVITY IN C-13 FT NMR USING 20-MM SAMPLE TUBES. INT. LAB. JAN.-FEB. PP. 27-31.

(899) APPEL, W. 1971. [CHARACTERIZATION OF CLINICAL DEXTRAN] (IN GERMAN, ENGLISH ABSTRACT). MED. KLIN. MUNICH 66:484-489. ALSO IN CHEM. ABSTR. 1971. 75:40365C.

(900) BEKE, G., AND T. GILANYI. 1969. LIGHT SCATTERING INVESTIGATION OF CLINICAL DEXTRAN. MAGY. KEM. FOLY. 75:440-443. ALSO IN CHEM. ABSTR. 1970. 72:24549Y.

(901) ------ AND T. GILANYI. 1971. INVESTIGATION OF DEXTRAN BY LIGHT SCATTERING. ANN. UNIV. SCI. BUDAP. ROLANDO EOTVOS NOMINATAE SECT. CHIM. 12:95-101. ALSO IN CHEM. ABSTR. 1972. 76:82513A.

(902) BOOTH, G. C., AND V. GOLD. 1956. MOLECULAR-WEIGHT STUDIES OF DEXTRAN. J. CHEM. SOC. 3380-3385.

(903) CADWALLADER, D. E., C. H. BECKER, J. H. WINTER, AND D. MARCUS. 1958. PARTICULATE MATTER ENCOUNTERED IN SOME DEXTRAN INJECTIONS. J. AM. PHARM. ASSOC. 47:894-895.

(904) CAMPBELL, H. 1956. SIZE AND SHAPE OF MACROMOLECULES IN PLASMA EXPANDERS. (A REVIEW.) J. PHARM. PHARMACOL. 8:93-109.

(905) CHERNYAK, V. Y., AND T. V. POLUSHINA. 1961. [DETERMINATION OF MOLECULAR WEIGHT OF POLYGLUKIN] (IN RUSSIAN). MED. PROM. SSSR 15(8):39-43. ALSO IN CHEM. ABSTR. 1962. 56:6097I.

(906) ------ AND T. V. POLUSHINA. 1962. [MODIFIED METHOD OF DETERMINING THE CHARACTERISTIC VISCOSITY OF POLYGLUCIN IN CALCULATING ITS MOLECULAR WEIGHT] (IN RUSSIAN). MED. PROM. SSSR 16(11):39-42. ALSO IN CHEM. ABSTR. 1963. 58:10312E.

(907) DETAK, J., J. HEJLEK, J. JANAT, AND L. JINDRA. 1966. [INSTABILITY OF DEXTRAN SOLUTIONS CAUSED BY ZINC COMPOUNDS FROM RUBBER STOPPERS] (IN GERMAN). SCI. PHARM. PROC. CONGR. 25TH 2:439-446. ALSO IN CHEM. ABSTR. 1969. 70:50451P.

(908) DINTZIS, F. R., AND R. TOBIN. 1969. OPTICAL ROTATION OF SOME ALPHA-1,4-LINKED GLUCOPYRANOSIDES IN THE SYSTEM H2O-DMSO AND SOLUTION CONFORMATION OF AMYLOSE. BIOPOLYMERS 7:581-593.

(909) ------, R. TOBIN, AND G. E. BABCOCK. 1971. AMYLOSE OPTICAL ROTATION IN SOME MIXED SOLVENT SYSTEMS. BIOPOLYMERS 10:379-389.

(910) EBERT, K. H. 1966. [PHYSICAL AND CHEMICAL PROPERTIES OF PLASMA EXPANDERS] (IN GERMAN). (A REVIEW.) ANAESTHESIOL. WIEDERBELEB. 13:198-204. ALSO IN CHEM. ABSTR. 1967. 67:62676S.

(911) ------ AND M. MUELLER. 1970. [ULTRASONIC DECOMPOSITION OF HIGH POLYMERS] (IN GERMAN). NATURWISSENSCHAFTEN 57:671. ALSO IN CHEM. ABSTR. 1971. 74:54329K.

(912) EWALD, R. A., A. A. YOUNG, AND W. H. CROSBY. 1964. PARTICLE FORMATION IN DEXTRAN SOLUTIONS. MIL. MED. 129:952-955.

(913) FOSTER, F. H. 1968. DEXTRAN-MANUFACTURE AND USE PART 2. (A REVIEW ON CLINICAL DEXTRAN--ITS PROPERTIES AND COMPARISON WITH LOW MOLECULAR WEIGHT DEXTRAN AND WITH OTHER PLASMA SUBSTITUTES.) PROCESS BIOCHEM. 3:55-57; 62.

(914) FOSTER, T. S., AND R. H. PEARCE. 1961. ZONE ELECTROPHORESIS OF ACID MUCOPOLYSACCHARIDES. (DEXTRAN INCLUDED.) CAN. J. BIOCHEM. PHYSIOL. 39:1771-1782.

(915) GARDNER, B. 1969. EFFECT OF DEXTRANS ON ZETA POTENTIAL. PROC. SOC. EXP. BIOL. MED. 131:1115-1118.

(916) GARVAN, J. M., AND B. W. GUNNER. 1963. INTRAVENOUS FLUIDS: "A SOLUTION CONTAINING SUCH PARTICLES MUST NOT BE USED." MED. J. AUST. 2:140-145.

(917) GRANATH, K. A., R. STROEMBERG, AND A. N. DEBELDER. 1969. STUDIES ON HYDROXYETHYL STARCH: FRACTIONATION AND MOLECULAR WEIGHT. DISTRIBUTION BY GEL CHROMATOGRAPHY. (COMPARISON WITH CLINICAL DEXTRAN.) STAERKE 21:251-256.

(918) HINT, H. C. 1971. RELATIONSHIPS BETWEEN THE CHEMICAL AND PHYSIOCOCHEMICAL PROPERTIES OF DEXTRAN AND ITS PHARMACOLOGICAL EFFECTS. IN J. R. DERRICK AND M. M. GUEST, EDS. DEXTRANS. CURRENT CONCEPTS OF BASIC ACTIONS AND CLINICAL APPLICATIONS, PP. 3-26. CHARLES C. THOMAS, PUBLISHER, SPRINGFIELD, ILLINOIS.

(919) INGELMAN, B. 1969. CHEMISTRY OF DEXTRANS AND SOME DEXTRAN PRODUCTS. ACTA ACAD. REGIAE SCI. UPS. 12:9-23.

(920) KIRKLAND, W. D., R. W. JONES, J. R. ELLIS, AND C. G. SCHULTZ. 1961. COMPATIBILITY STUDIES OF PARENTERAL MIXTURES. AM. J. HOSP. PHARM. 18:694-699. ALSO IN CHEM. ABSTR. 1962. 56:8855I.

(921) KRIVOSHEEV, N. P., A. I. VALAKHANOVICH, L. S. KAPITONOVA, AND OTHERS. 1962. [ON THE PH REDUCTION OF POLYGLUCIN SOLUTIONS DURING STERILIZATION] (IN RUSSIAN). MED. PROM. SSSR 16(9):43-45. ALSO IN CHEM. ABSTR. 1963. 58:4383C.

(922) LECOMTE, J., AND J. DAMAS. 1970. COMPARATIVE PHARMACOLOGICAL PROPERTIES OF THREE DEXTRANS OF DIFFERENT MOLECULAR WEIGHTS. BULL. SOC. ROY. SCI. LIEGE 39:188-199. ALSO IN CHEM. ABSTR. 1970. 73:129212G.

(923) LJUNGGREN, S., AND O. LAMM. 1957. DIFFUSION FROM A BOTTOM LAYER: DIFFUSION WITH MOVING BOUNDARIES. ACTA CHEM. SCAND. 11:340-359.

(924) LYON, T. C., JR., J. D. BEASLEY, III, AND D. E. CUTRIGHT. 1974. PARTICULATE CONTAMINATION OF DEXTRAN FOR INTRAVENOUS USE. IN VITRO AND IN VIVO STUDY. MIL. MED. 139(6):466-469. ALSO IN CHEM. ABSTR. 1974. 81:111454T.

(925) MARTIN, L. E. 1955. DEXTRAN. A PLASMA VOLUME EXPANDER. (A REVIEW.) CHEM. IND. (LONDON) (8):184-191.

(926) MAYCOCK, W. D'A., AND C. R. RICKETTS. 1961. STABILITY OF DEXTRAN DURING PROLONGED STORAGE. NATURE (LONDON) 192:174-175.

(927) ------ AND C. R. RICKETTS. 1967. STABILITY OF DEXTRAN DURING PROLONGED STORAGE. NATURE (LONDON) 213:88.

(928) NEMES-NANASI, E. 1967. INVESTIGATION OF THE STRUCTURE OF DEXTRANS BY PHYSICAL METHODS: INFRARED SPECTROSCOPIC INVESTIGATIONS. ACTA BIOL. DEBRECINA 5:67-70. ALSO IN CHEM. ABSTR. 1968. 68:111524X.

(929) ------. 1968. INVESTIGATION OF THE STRUCTURE OF DEXTRANS BY PHYSICAL METHODS. INFRARED SPECTROSCOPIC INVESTIGATIONS II. ACTA BIOL. DEBRECINA 6:89-92. ALSO IN CHEM. ABSTR. 1969. 71:67424A.

(930) NOMURA, H., S. YAMAGUCHI, AND Y. MIYAHARA. 1964. PARTIAL SPECIFIC COMPRESSIBILITY OF DEXTRAN. J. APPL. POLYM. SCI. 8:2731-2734.

(931) ORSZAGH, A., E. ZAWADA, AND J. ZURAKOWSKA-ORSZAGH. 1973. EFFECT OF IONIZING RADIATION ON DEXTRAN OF POLISH PRODUCTION. J. POLYM. SCI. POLYM. SYMP. 42:1467-1473.

(932) ROTHMAN, S., A. SCHWEBEL, AND S. G. WEISSBERG. 1953. SORPTION OF DEXTRAN TO COLLOIDION MEMBRANES. J. POLYM. SCI. 11:381-382.

(933) ------, J. MANDEL, F. R. MCCANN, AND S. G. WEISSBERG. 1955. SORPTION OF MACROMOLECULES TO SOLID SURFACES: SORPTION OF DEXTRAN TO CELLULOSE NITRATE MEMBRANES IN THE PRESENCE OF SERUM ALBUMIN AND SURFACE-ACTIVE AGENTS. J. COLLOID SCI. 10:338-350.

(934) ROWE, C. E. 1957. THE RELATIONSHIP BETWEEN SPECIFIC OPTICAL ROTATION AND BRANCHING OF DEXTRAN. CHEM. IND. (LONDON) (25):816-817.

(935) ROWE, D. S. 1955. COLLOID OSMOTIC PRESSURES OF DEXTRAN, SERUM AND DEXTRAN-SERUM MIXTURES. NATURE (LONDON) 175:554-555.

(936) SENTI, F. R., AND N. N. HELLMAN. 1956. NOTE ON MOLULAR WEIGHT AND ULTRACENTRIFUGAL SEDIMENTATION PATTERNS OF STREPTOCOCCUS 50 DEXTRAN. J. BIOL. CHEM. 222:747-750.

(937) SMITH, M. C. 1965. THE DEXTRANS. AM. J. HOSP. PHARM. 22(5):272-275. ALSO IN CHEM. ABSTR. 1965. 63:5446H.

(938) SNYDER, C. F., H. S. ISBELL, M. R. DRYDEN, AND N. B. HOLT. 1954. OPTICAL ROTATIONS, REFRACTIVE INDICES, AND DENSITIES OF DEXTRAN SOLUTIONS. J. RES. NAT. BUR. STAND. 53:131-137.

(939) SPRINGER, R. 1971. [STABILITY PROBLEMS OF PLASMA SUBSTITUTES] (IN GERMAN). WEHRMED. MONATSSCHR. 15:129-133.

(940) STAVRI, D. 1961. [THE EFFECTIVE DIFFUSION RADIUS (RES) OF THE DEXTRAN MOLECULE AND ITS IMPORTANCE] (IN ROMANIAN). ARCH. ROUM. PATHOL. EXP. MICROBIOL. 20:137-144. ALSO IN CHEM. ABSTR. 1961. 55:24850E.

(941) VESSEY, I., AND C. E. KENDALL. 1966. DETERMINATION OF PARTICULATE MATTER IN INTRAVENOUS FLUIDS. ANALYST 91:273-279.

(942) WEISSBERG, S. G., AND H. S. ISBELL. 1951. MOLECULAR PROPERTIES OF PLASMA SUBSTITUTES. (METHODS FOR: FRACTIONATION AND PRECIPITABILITY; MOLECULAR WEIGHT DETERMINATION BY CHEMICAL AND PHYSICAL TECHNIQUES; AND DETERMINATION OF MOISTURE, BRANCH STRUCTURE, AND OPTICAL ROTATION. 33 FIGURES AND 19 TABLES.) U.S. NAT. BUR. STAND. REP. 1160.

(943) ------ AND H. S. ISBELL. 1952. MOLECULAR PROPERTIES OF PLASMA SUBSTITUTES. (MOLECULAR WEIGHT BY END-GROUP METHODS; INTRINSIC VISCOSITY--MOLECULAR WEIGHT RELATIONSHIPS; CHARACTERIZATION OF CLINICAL DEXTRAN FOR PURCHASE SPECIFICATION; AND OPTICAL ROTATION, REFRACTIVE INDEX, AND DENSITY OF COMMERCIAL CLINICAL DEXTRANS. 4 FIGURES AND 33 TABLES.) U.S. NAT. BUR. STAND. REP. 1713.

(944) ------. 1953. INVESTIGATION OF DEXTRAVEN. U.S. NAT. BUR. STAND. REP. 2660, 9 PP.

(945) ------ AND H. S. ISBELL. 1954. PROGRESS REPORT ON MOLECULAR PROPERTIES OF PLASMA SUBSTITUTES. (CHARACTERIZATION OF STANDARD FRACTIONS AND COMMERCIAL CLINICAL DEXTRANS; STUDIES RELATED TO RENAL CLEARANCE AND TO SORPTION ON COLLODION MEMBRANES, BLOOD PLATELETS, AND ERYTHROCYTES. 1 FIGURE AND 12 TABLES.) U.S. NAT. BUR. STAND. REP. 3397, 24 PP.

(946) ------. 1955. INTERCOMPARISON OF BRITISH AND AMERICAN COMMERCIAL DEXTRANS. (PHYSICO-CHEMICAL EVALUATION OF BRITISH AND AMERICAN COMMERCIAL CLINICAL DEXTRAN SOLUTIONS. 2 FIGURES AND 8 TABLES.) U.S. NAT. BUR. STAND. REP. 3997, 10 PP.

(947) ZEBEC, M., G. DEZELIC, N. DEZELIC, AND OTHERS. 1964. PHYSICOCHEMICAL STUDIES OF DEXTRAN. I. CHARACTERIZATION OF CLINICAL SAMPLES. CROAT. CHEM. ACTA 36:13-26. ALSO IN CHEM. ABSTR. 1964. 61:12179E.

(948) ZHBANKOV, R. G., N. P. KRIVOSHEEV, AND G. V. RELTOVICH. 1962. [APPLICATION OF THE SPECTROSCOPY IN THE INVESTIGATION OF SYNTHETIC BLOOD SUBSTITUTES] (IN RUSSIAN). DOKL. AKAD. NAUK B. SSR 6:592-594. ALSO IN CHEM. ABSTR. CHEM. ABSTR. 1963. 58:1713E.

(949) ZORINA, O. M., AND I. E. EL'PINER. 1963. [PHYSICOCHEMICAL CHANGES IN DEXTRAN (POLYGLUCIN) CAUSED BY ULTRASONIC WAVES] (IN RUSSIAN). BIOKHIMIYA 28:781-785. ALSO IN BIOCHEMISTRY ENGL. TRANS. 28(5):644-648.

SEE ALSO: 388 THROUGH 434 435 THROUGH 486 492
569 570 791 793 826 888 896
950 THROUGH 997 1497 1524 THROUGH 1526 1750
2026 2121

B. Other Sizes

Physicochemical measurements and constants; relation between properties and molecular weight.

(950) AHRGREN, L., AND A. N. DEBELDER. 1975. THE ACTION OF FENTON'S REAGENT ON DEXTRAN. STAERKE 27(4):121-123.

(951) BASEDOW, A. M., AND K. H. EBERT. 1974. MECHANISM OF THE DEGRADATION OF POLYMERS IN SOLUTION BY ULTRASOUND. ANGEW. CHEM. INT. ED. ENGL. 13: 413. ALSO IN CHEM. ABSTR. 1975. 82:43885C.

(952) BONNER, F. J. 1973. OBSERVATIONS ON THE THERMAL DIFFUSION OF DEXTRAN AND POLYSTYRENE. CHEM. SCRIPTA 3:149-152.

(953) BROOKS, D. E., AND G. V. F. SEAMAN. 1973. THE EFFECT OF NEUTRAL POLYMERS ON THE ELECTROKINETIC POTENTIAL OF CELLS AND OTHER CHARGED PARTICLES. I. MODELS FOR THE ZETA POTENTIAL INCREASE. J. COLLOID INTERFACE SCI. 43:670-686.

(954) ------. 1973. THE EFFECT OF NEUTRAL POLYMERS ON THE ELECTROKINETIC POTENTIAL OF CELLS AND OTHER CHARGED PARTICLES. II. A MODEL FOR THE EFFECT OF ABSORBED POLYMER ON THE DIFFUSE DOUBLE LAYER. J. COLLOID INTERFACE SCI. 43:687-699.

(955) ------. 1973. THE EFFECT OF NEUTRAL POLYMERS ON THE ELECTROKINETIC POTENTIAL OF CELLS AND OTHER CHARGED PARTICLES. III. EXPERIMENTAL STUDIES ON THE DEXTRAN/ERYTHROCYTE SYSTEM. J. COLLOID INTERFACE SCI. 43:700-713.

(956) ------. 1973. THE EFFECT OF NEUTRAL POLYMERS ON THE ELECTROKINETIC POTENTIAL OF CELLS AND OTHER CHARGED PARTICLES. IV. ELECTROSTATIC EFFECTS IN DEXTRAN-MEDIATED CELLULAR INTERACTIONS. J. COLLOID AND INTERFACE SCI. 43:714-726.

(957) BRUCE, C., AND W. H. SCHWARZ. 1969. SECOND AND THIRD ORDER FLUIDS. POLYM. PREPR. AM. CHEM. SOC. DIV. POLYM. CHEM. 10:152-159.

(958) CARPENTER, D. O., M. M. HOVEY, AND A. F. BAK. 1973. MEASUREMENTS OF INTRACELLULAR CONDUCTIVITY IN APLYSIA NEURONS: EVIDENCE FOR ORGANIZATION OF WATER AND IONS. (EFFECT OF DEXTRAN FRACTIONS ON CONDUCTIVITY AND VISCOSITY OF SALT SOLUTION.) IN C. F. HAZLEWOOD, PHYSICOCHEMICAL STATE OF IONS AND WATER IN LIVING TISSUES AND MODEL SYSTEMS. PART VI. CELLULAR ORGANIZATION AND TRANSPORT. ANN. N.Y. ACAD. SCI. 204:502-533.

(959) CERBON, J. 1967. NMR STUDIES ON THE WATER IMMOBILIZATION BY LIPID SYSTEMS IN VITRO AND IN VIVO. (DEXTRAN FRACTIONS: WEAKLY-CHARGED MODELS.) BIOCHIM. BIOPHYS. ACTA 144:1-9.

(960) CERNY, L. C., J. MCTIERNAN, AND D. M. STASIW. 1973. DEXTRAN: A BRANCHED POLYMER AND PLASMA EXPANDER. J. POLYM. SCI. POLYM. SYMP. 42:1455-1465.

(961) CHURMS, S. C., A. M. STEPHEN, AND P. VAN DER BIJL. 1970. THE EFFECT OF SAMPLE CONCENTRATION ON GEL CHROMATOGRAPHY OF POLYSACCHARIDES ON POLY-ACRYLAMIDE GELS. J. CHROMATOGR. 47:97-99.

(962) CIFERRI, A., AND M. DUANE. 1958. [DETERMINATION OF MASS DISTRIBUTION FUNCTION IN A SAMPLE OF DEXTRAN BY SEDIMENTATION AND TRANSLATION DIFFUSION] (IN FRENCH). J. POLYM. SCI. 27:581-584.

(963) DE BOER, W., H. J. HOENDERS, P. A. J. DE BOER, AND H. A. TOOROP. 1967. [DEXTRAN AS AN INDICATOR IN AGAR GEL ELECTROPHORESIS] (IN GERMAN). CLIN. CHIM. ACTA 15:533-540. ALSO IN CHEM. ABSTR. 1967. 66:62510N.

(964) EDBERG, S. C., P. M. BRONSON, AND C. J. VAN OSS. 1971. THE FRACTIONATION OF HYDROLYZED DEXTRAN BY ULTRAFILTRATION THROUGH A SERIES OF ANISOTROPIC CELLULOSE ACETATE MEMBRANES. PREP. BIOCHEM. 1(3):249-257.

(965) ------, P. M. BRONSON, AND C. J. VAN OSS. 1972. VALENCY OF IGM AND IGG RABBIT ANTIDEXTRAN ANTIBODY AS A FUNCTION OF THE SIZE OF THE DEXTRAN MOLECULE. IMMUNOCHEMISTRY 9(3):273-288.

(966) EDMOND, E., S. FARQUHAR, J. R. DUNSTONE, AND A. G. OGSTON. 1968. OSMOTIC BEHAVIOUR OF SEPHADEX AND ITS EFFECTS ON CHROMATOGRAPHY. (OSMOTIC PRESSURE OF DEXTRAN FRACTIONS: EFFECT ON INNER VOLUME OF SEPHADEX BEADS AND ON ELUTION VOLUMES; NEW METHOD FOR MEASURING.) BIOCHEM. J. 108:755-763.

(967) FEDIN, E. I., V. G. TSITSISHVILI, V. Y. GRINBERG, AND OTHERS. 1975. A STUDY OF DEXTRAN HYDRATION IN DILUTE, AQUEOUS SOLUTION BY THE PROTON MAGNETIC RELAXATION METHOD. CARBOHYDR. RES. 39:193-199.

(968) GARDNER, B. 1969. THE EFFECT OF DEXTRANS ON ZETA POTENTIAL. PROC. SOC. EXP. BIOL. MED. 131:1115-1118.

(969) GEKKO, K., AND H. NOGUCHI. 1971. PHYSICOCHEMICAL STUDIES OF OLIGODEXTRAN. I. MOLECULAR WEIGHT DEPENDENCE OF INTRINSIC VISCOSITY, PARTIAL SPECIFIC COMPRESSIBILITY AND HYDRATED WATER. BIOPOLYMERS 10:1513-1524.

(970) ------. 1971. PHYSICOCHEMICAL STUDIES OF OLIGODEXTRAN II. INTRINSIC VISCOSITY-MOLECULAR WEIGHT RELATIONSHIP. MAKROMOL. CHEM. 148:229-238.

(971) GRANATH, K. A. 1958. SOLUTION PROPERTIES OF BRANCHED DEXTRANS. J. COLLOID SCI. 13:308-328.

(972) GREGERSEN, M. I., B. PERIC, S. USAMI, AND S. CHIEN (WITH THE TECHNICAL ASSISTANCE OF M. K. LUBIC). 1963. RELATION OF MOLECULAR SIZE OF DEXTRAN TO ITS EFFECTS ON THE RHEOLOGICAL PROPERTIES OF BLOOD. PROC. SOC. EXP. BIOL. MED. 112:883-886.

(973) HAMDY, M. K., E. GARDNER, Q. VAN WINKLE, AND G. L. STAHLY. 1958. RELATIONSHIP BETWEEN LIGHTSCATTERING, VISCOSITY, AND GOLD NUMBER FOR SEVERAL DEXTRAN FRACTIONS. OHIO J. SCI. 58:177-181.

(974) HAWLEY, S. A., L. W. KESSLER, AND F. DUNN. 1965. ULTRASONIC ABSORPTION IN AQUEOUS SOLUTIONS OF HIGH-MOLECULAR-WEIGHT POLYSACCHARIDES. J. ACOUST. SOC. AM. 38(4):521-523. ALSO IN CHEM. ABSTR. 1965. 63:16655D.

(975) ------ AND F. DUNN. 1969. ULTRASONIC ABSORPTION IN AQUEOUS SOLUTIONS OF DEXTRAN. J. CHEM. PHYS. 50:3523-3526.

(976) ------ AND F. DUNN. 1970. ULTRASONIC RELAXATION SPECTRA IN AQUEOUS SOLUTIONS OF DEXTRAN AND POLYETHYLENE GLYCOL. J. CHEM. PHYS. 52:5497-5498.

(977) HORWITZ, C. 1966. THE EFFECT OF LOW MOLECULAR WEIGHT DEXTRAN AND DEXTROSE SOLUTIONS ON THE ZETA POTENTIAL AND INTERFACIAL TENSION OF MILK-FAT GLOBULES. BIORHEOLOGY 4:1-6.

(978) HUSEMANN, E., R. LOETTERLE, M. WIEDERSCHEIM, AND W. HERTLEIN. 1954. [PHARMACOLOGY OF WATER-SOLUBLE POLYSACCHARIDES AND THEIR DERIVATIVES IN RELATION TO MOLECULAR SIZE, MOLECULAR SHAPE, AND TYPE OF SUBSTITUTION] (IN GERMAN). MAKROMOL. CHEM. 12:79-93.

(979) KUNKEL, H. G., AND A. TISELIUS. 1951. ELECTROPHORESIS OF PROTEINS ON FILTER PAPER. (DEXTRAN: AN ELECTRICALLY INERT REFERENCE SUBSTANCE.) J. GEN. PHYSIOL. 35:89-118.

(980) MARIANI, E., A. CIFERRI, AND M. MARAGHINI. 1955. OSMOTIC MEASUREMENTS ON DILUTE DEXTRAN SOLUTIONS. J. POLYM. SCI. 18:303-304.

(981) ------, A. CIFERRI, AND M. MARAGHINI. 1955. [OSMOTIC PRESSURE OF DILUTE AQUEOUS DEXTRAN SOLUTIONS] (IN ITALIAN). ANN. CHIM. 45:1091-1105. ALSO IN CHEM. ABSTR. 1957. 51:4095G.

(982) ------ AND A. CIFERRI. [VISCOSITY OF DEXTRAN SOLUTIONS. I. THE RELATION BETWEEN REDUCED VISCOSITY AND CONCENTRATION] (IN ITALIAN). 1956. ANN. CHIM. 46:1001-1015. ALSO IN CHEM. ABSTR. 1957. 51:8511F.

(983) MITCHELL, P., AND J. MOYLE. 1959. PERMEABILITY OF THE ENVELOPES OF STAPHLOCOCCUS AUREUS TO SOME SALTS, AMINO ACIDS, AND NON-ELECTROLYTES. J. GEN. MICROBIOL. 20:434-441.

(984) NORTHCOTE, D. H. 1953. THE SORPTION OF WATER VAPOUR BY YEAST CELL WALL AND OTHER POLYSACCHARIDES. BIOCHIM. BIOPHYS. ACTA 11:471-479.

(985) ORSZAGH, A., E. ZAWADA, AND J. ZURAKOWSKA-ORSZAGH. 1973. EFFECT OF IONIZING RADIATION ON DEXTRAN OF POLISH PRODUCTION. J. POLYM. SCI. POLYM. SYMP. 42:1467-1473.

(986) PATAT, F., E. KILLMANN, AND C. SCHLIEBENER. 1964. [THE ADSORPTION OF MACROMOLECULES FROM SOLUTION] (IN GERMAN). FORTSCHR. HOCHPOLYM. FORSCH. 3:332-393.

(987) REEMTSMA, K., AND O. CREECH, JR. 1962. VISCOSITY STUDIES OF BLOOD, PLASMA AND PLASMA SUBSTITUTES. J. THORAC. CARDIOVASC. SURG. 44:674-680.

(988) SKRINDE, R. T., W. L. SHORT, AND D. J. SMOLA. 1970. REVERSE OSMOSIS TREATMENT OF WASTE WATERS. APPL. POLYM. SYMP. 13:323-334.

(989) SOROCHAN, V. D., A. K. DZIZENKO, N. S. BODIN, AND Y. S. OVODOV. 1971. LIGHT-SCATTERING STUDIES OF PECTIC SUBSTANCES IN AQUEOUS SOLUTION. (DEXTRAN INCLUDED.) CARBOHYDR. RES. 20:243-249.

(990) VALTASAARI, L. 1967. [MODEL EXPERIMENTS ON DEXTRAN AND SEPHADEX FOR GEL CHROMATOGRAPHY OF CELLULOSE DISSOLVED IN IRON TARTRATE] (IN FINNISH). PAP. PUU 49:517-524. ALSO IN CHEM. ABSTR. 1967. 67:91814R.

(991) VINK, H. 1967. PHASE EQUILIBRIA IN DEXTRAN-BARIUM HYDROXIDE SOLUTIONS. MAKROMOL. CHEM. 110:144-149.

(992) ------. 1971. PRECISION MEASUREMENTS OF OSMOTIC PRESSURE IN CONCENTRATED POLYMER SOLUTIONS. EUR. POLYM. J. 7:1411-1419.

(993) WALL, F. T., AND C. W. CHILDERS. 1953. MEASUREMENT OF ORDINARY DIFFUSION COEFFICIENTS OF POLYMERS. J. AM. CHEM. SOC. 75:3550-3552.

(994) ZAKRZEWSKI, K., J. KRYSIAK, K. MURAWSKI, AND OTHERS. 1954. [MOLECULAR STRUCTURE OF THE PRODUCTS OF DEXTRAN HYDROLYSIS] (IN POLISH). ACTA BIOCHIM. POL. 1:27-45. ALSO IN CHEM. ABSTR. 1955. 49:4053C.

(995) ------, J. KRYSIAK, K. MURAWSKI, AND OTHERS. 1964. DEXTRAN HYDROLYSATE, A HOMOLOGOUS SERIES OF POLYSACCHARIDES. BULL. ACAD. POL. SCI. CL. 2, 2(2):67-71.

(996) ------, Z. MAY, AND K. MURAWSKI. 1956. [THE INTERACTION BETWEEN BORATE AND DEXTRAN] (IN RUSSIAN). BIOKHIMIYA 21:596-602. ALSO IN BIOCHEMISTRY ENGL. TRANS. 21:617-623 AND CHEM. ABSTR. 1957. 51:5449B.

(997) ZINSSER, H. H., AND I. LIGHT. 1962. INTERACTION OF POLYSACCHARIDES IN THE CALCIUM OXALATE SYSTEM. J. POLYM. SCI. 58:1153-1163.

SEE ALSO: 403 435 436 THROUGH 486 496 799 804 806 826 833 835 852 856 868 876 898 THROUGH 949 951 1290 1498 THROUGH 1502 1506 1514 1517 1532 THROUGH 1535 1537 1539 1540 1554 1557 1571 1573 1754 2185

XII. Analytical methods and measurements

A. Chemical Analyses

Methods for determination of dextran; analysis of dextrans for fructose, moisture, and reducing-end group.

(998) DIMLER, R. J., H. A. DAVIS, G. J. GILL, AND C. E. RIST. 1954. ANALYTICAL TOTAL ACID HYDROLYSIS OF DEXTRANS. ANAL. CHEM. 26:1142-1146.

(999) DUBOIS, M., K. A. GILLES, J. K. HAMILTON, AND OTHERS. 1956. COLORIMETRIC METHOD FOR DETERMINATION OF SUGARS AND RELATED SUBSTANCES. ANAL. CHEM. 28:350-356.

(1000) LAUNER, H. F., AND Y. TOMIMATSU. 1959. STOICHIOMETRY OF CHLORITE-ALDEHYDE REACTIONS: ANALYTICAL PROCEDURES. ANAL. CHEM. 31:1385-1390.

(1001) ------ AND Y. TOMIMATSU. 1959. REACTION OF SODIUM CHLORITE WITH VARIOUS POLYSACCHARIDES: RATE STUDIES AND ALDEHYDE GROUP DETERMINATIONS. ANAL. CHEM. 31:1569-1574.

(1002) ------ AND Y. TOMIMATSU. 1961. ALKALI SENSITIVITY OF POLYSACCHARIDES: PERIODATE STARCHES, PERIODATE DEXTRAN AND A POLYGALACTURONIDE. J. ORG. CHEM. 26:541-545.

(1003) LUNT, E., AND D. SUTCLIFFE. 1953. A NEW COLORIMETRIC REAGENT FOR CARBOHYDRATES. BIOCHEM. J. 55:122-126.

(1004) MOYER, J. D., AND H. S. ISBELL. 1958. DETERMINATION OF REDUCING SUGARS AND REDUCING END GROUPS IN POLYSACCHARIDES BY REACTION WITH CARBON-14-LABELLED CYANIDE. ANAL. CHEM. 30:1975-1978.

(1005) PASIKA, W. M., AND A. C. WEST, III. 1971. QUANTITATIVE DETERMINATION OF WATER IN A HYDROPHILIC MACROMOLECULAR SAMPLE (DEXTRAN) BY GAS CHROMATOGRAPHY. ANAL. CHEM. 43:275-276.

(1006) SCOTT, T. A., JR., AND E. H. MELVIN. 1953. DETERMINATION OF DEXTRAN WITH ANTHRONE. ANAL. CHEM. 25:1656-1661.

(1007) VASSEUR, E. 1948. A SPECTROPHOTOMETRIC STUDY ON THE ORCINOL REACTION WITH CARBOHYDRATES. ACTA CHEM. SCAND. 2:693-701.

(1008) WISE, C. S., R. J. DIMLER, H. A. DAVIS, AND C. E. RIST. 1955. DETERMINATION OF EASILY HYDROLYZABLE FRUCTOSE UNITS IN DEXTRAN PREPARATIONS. ANAL. CHEM. 27:33-36.

SEE ALSO: 788 855 1290

B. Determination of Dextran in Biological Materials

Clinical analyses; and influence of dextran on analysis of other substances.

(1009) APPEL, W., V. WIRMER, AND D. SPRENGARD. 1968. [QUANTITATIVE MICRODETERMINATION OF DEXTRAN. I. DETERMINATION IN BODY FLUIDS] (IN GERMAN). Z. KLIN. CHEM. KLIN. BIOCHEM. 6:452-459. ALSO IN CHEM. ABSTR. 1969. 70:34955A.

(1010) ------, V. WIRMER, ST. EBENEZER. 1969. [EFFECT OF CLINICAL DEXTRANS ON LABORATORY EXPERIMENTS] (IN GERMAN). AERZTL. LAB. 15(7):273-276. ALSO IN CHEM. ABSTR. 1970. 72:75568M.

(1011) BLOOM, W. L., AND M. L. WILLCOX. 1951. DETERMINATION OF DEXTRAN IN BLOOD AND URINE. PROC. SOC. EXP. BIOL. MED. 76:3-4.

(1012) BOURRILLON, R. 1953. [METHOD FOR DETERMINATION OF DEXTRAN IN BIOLOGICAL FLUIDS] (IN FRENCH). COMPT. REND. SOC. BIOL. 147:238-240.

(1013) BULL, A., N. V. B. MARSDEN, AND H. R. ULFENDAHL. 1960. SOME APPLICATIONS OF A NEW GEL-FILTRATION METHOD FOR MOLECULAR SEPARATION. SCAND. J. CLIN. LAB. INVEST. 12:392-395. ALSO IN CHEM. ABSTR. 1962. 56:10496B.

(1014) CLAYTON, D., P. E. PHILIPSON. 1972. A RAPID INSTRUMENTAL METHOD FOR THE DETERMINATION OF DEXTRAN IN URINE. BIOCHEM. MED. 6:59-64.

(1015) DENT, E. DU B., A. R. WASSELL, AND F. J. SVEC. 1954. EFFECT OF DEXTRAN ON THE VOLHARD CHLORIDE DETERMINATION. J. AM. MED. ASSOC. 156:123-124.

(1016) GOHR, H., A. BOLTE, AND H. LANGENBERG. 1953. [INVESTIGATIONS ON THE MICRODETERMINATION OF THE PLASMA SUBSTITUTE DEXTRAN IN BLOOD, URINE, AND ORGANS] (IN GERMAN). Z. GESAMTE INN. MED. IHRE GRENZGEB. 8:773-779. ALSO IN CHEM. ABSTR. 1955. 49:4767C.

(1017) HACKLEY, B. M., J. C. SMITH, J. A. HALSTED. 1968. A SIMPLIFIED METHOD FOR PLASMA ZINC DETERMINATION BY ATOMIC ABSORPTION SPECTROPHOTOMETRY. CLIN. CHEM. 14:1-5.

(1018) HINT, H. C., H. G. R. THORSEN. 1947. A MICRO METHOD FOR DETERMINATION OF DEXTRAN IN BLOOD. ACTA CHEM. SCAND. 1:808-812.

(1019) HOBBS, J. R. 1965. A STAINING METHOD FOR PROTEINS AND DEXTRAN ON CELLULOSE ACETATE. NATURE (LONDON) 207:292-293.

(1020) JACOBSSON, L., AND H. HANSEN. 1952. A SIMPLE METHOD FOR THE DETERMINATION OF DEXTRAN IN BLOOD AND URINE. SCAND. J. CLIN. LAB. INVEST. 4:352-354.

(1021) ------ AND H. HANSEN. 1953. ESTIMATION OF SERUM PROTEIN AND DEXTRAN IN TREATMENT WITH MACRODEX. NORD. MED. 49:362. ALSO IN EXCERPTA MED. SECT. 2, 7:185-186 AND CHEM. ABSTR. 1955. 49:13343E.

(1022) JENSEN, R. E., A. LANGSJOEN, R. LEWANDOWSKI, AND J. BORTZ. 1968. RAPID SPECTROPHOTOMETRIC DETERMINATION OF LOW-MOLECULAR-WEIGHT DEXTRAN IN BLOOD. ANAL. CHIM. ACTA 42:162-165.

(1023) KLEVAS, S. 1944. [DETERMINATION OF THE PLASMA SUBSTITUTE DEXTRAN IN BLOOD] (IN GERMAN). SVEN. KEM. TIDSKR. 56:262-267.

(1024) MANLY, R. S., AND A. D. CORMIER. 1970. SEMIAUTOMATED MICROANALYSIS OF LEVAN AND DEXTRAN. (IN DENTAL PLAQUE.) J. DENT. RES. 49:301-306.

(1025) MARSDEN, N. V. B., AND S. G. OESTLING. 1966. A TWO-SEGMENT COLUMN PROCEDURE FOR SINGLE STEP ISOLATION OF DEXTRAN FROM RED CELL SUSPENSIONS. ARK. KEMI 26:507-519.

(1026) METCALF, W., AND L. M. ROUSSELOT. 1952. A SIMPLE, ACCURATE, AND RAPID METHOD FOR THE QUANTITATIVE DETERMINATION OF DEXTRAN IN BLOOD AND URINE. J. LAB. CLIN. MED. 40:901-906.

(1027) OESTLING, S. G. 1960. A SIMPLE SEMIAUTOMATIC METHOD FOR THE SEPARATION OF DEXTRAN AND SUGARS. ACTA SOC. MED. UPS. 65:222-226.

(1028) PERLES, R., AND K. TODOROVITCH. 1956. [DETERMINATION OF GLYCIDIC SUBSTANCES BY ANTHRONE] (IN FRENCH). ANN. BIOL. CLIN. (PARIS) 14:697-705.

(1029) PREEDY, J. R. K. 1954. A METHOD FOR THE ESTIMATION OF INSULIN IN PLASMA AND URINE CONTAINING DEXTRAN. J. BIOL. CHEM. 210:651-655.

(1030) REDEI, A., S. NAGY. 1961. SIMULTANEOUS DETERMINATION OF DEXTRAN AND GLUCOSE IN SERUM. NATURE (LONDON) 191:173-174.

(1031) ROE, J. H. 1954. THE DETERMINATION OF DEXTRAN IN BLOOD AND URINE WITH ANTHRONE REAGENT. J. BIOL. CHEM. 208:889-896.

(1032) SEMPLE, R. E. 1957. AN ACCURATE METHOD FOR THE ESTIMATION OF LOW CONCENTRATIONS OF DEXTRAN IN PLASMA. CAN. J. BIOCHEM. PHYSIOL. 35:383-390.

(1033) SUELLMANN, H. 1952. [DETERMINATION OF DEXTRAN IN BIOLOGICAL MATERIAL] (IN GERMAN). HELV. MED. ACTA 19(1):19-28.

(1034) SZAFRANOWA, H., I. MICHALSKA, A. NOWICKA, AND I. NYKOWSKI. 1959. [COMPARISON OF RESULTS AS OBTAINED BY THE HINT-THORSEN AND ANTHRONE METHODS IN ESTIMATING DEXTRAN IN BLOOD] (IN POLISH, ENGLISH SUMMARY). ACTA POL. PHARM. 16:35-43. ALSO IN CHEM. ABSTR. 1959. 53:11494F.

(1035) WALLENIUS, G. 1953. SOME PROCEDURES FOR DEXTRAN ESTIMATION IN VARIOUS BODY FLUIDS. (A REVIEW OF CHEMICAL, SEROLOGICAL AND PHYSICAL METHODS.) ACTA SOC. MED. UPS. 59(1-2):69-77.

(1036) ------, H. J. WASCHEWSKY, T. ARONSSON, AND L. HEGEDUES. 1961. AUTOMATIC TURBIDIMETER FOR DETERMINATION OF MOLECULAR WEIGHT DISTRIBUTION OF POLMYERS. IN INSTRUM. MEAS. CHEM. ANAL. ELECTR. QUANT. NUCLEON. PROCESS CONTROL, PP. 472-477. PROC. INT. INSTRUM. MEAS. CONF., 5TH, 1960.

(1037) ZAKRZEWSKI, K., K. MURAWSKI, AND J. KRYSIAK. 1953. [A NEW METHOD FOR DETERMINING DEXTRAN IN BLOOD, URINE AND TISSUE] (IN POLISH). ACTA PHYSIOL. POL. 4:253-257.

SEE ALSO: 1859 1862 1863 1955 2029 2335

C. Detection and Measurement of Dextran in Natural Products

By chemical, physicochemical, enzymatic, and serological methods.

(1038) BIDINOST, L. E. 1960. [DETERMINATION OF DEXTRAN IN WINE BY PAPER CHROMATOGRAPHY] (IN SPANISH). AN. DIR. NAC. QUIM. (ARGENT.) 13:39-41. ALSO IN CHEM. ABSTR. 1962. 57:9010E.

(1039) KENIRY, J. S., J. B. LEE, AND V. C. MAHONEY. 1969. IMPROVEMENTS IN THE DEXTRAN ASSAY OF CANE SUGAR MATERIALS. INT. SUGAR J. 71:230-233.

(1040) LEAL, L. E., AND S. G. KARA-MURZA. 1972. [DETERMINATION OF POLYSACCHARIDES IN CANE JUICE AND THE PRODUCTS OF THE SUGAR INDUSTRY]. (IN SPANISH, ENGLISH SUMMARY). SOBRE DERIV. CANA AZUCAR 6(2):25-30. ALSO ABSTRACTED IN INT. SUGAR J. 1973. 75(900):395.

(1041) NEILL, J. M., E. J. HEHRE, J. Y. SUGG, AND E. JAFFE. 1939. SEROLOGICAL STUDIES ON SUGAR. I. REACTIONS BETWEEN SOLUTIONS OF REAGENT SUCROSE AND TYPE 2 ANTIPNEUMOCOCCUS SERUM. J. EXP. MED. 79:427-442.

(1042) ------, J. Y. SUGG, E. J. HEHRE, AND E. JAFFE. 1941. SEROLOGICAL STUDIES ON SUGAR. II. REACTIONS OF THE ANTISERUMS OF TYPE 2 PNEUMOCCOCUS AND OF LEUCONOSTOC MESENTEROIDES WITH CANE AND BEET SUGARS AND CANE JUICE. AM. J. HYG. 34:65-78.

(1043) ------, J. Y. SUGG, E. J. HEHRE, AND E. JAFFE. 1941. SEROLOGICAL STUDIES ON SUGAR. III. REACTIONS OF THE ANTISERUMS OF TYPE 2 PNEUMOCOCCUS AND OF LEUCONOSTOC MESENTEROIDES WITH SUGARS AND SIRUPS OF PALM, MAPLE, AND SORGHUM ORIGINS AND WITH SAUERKRAUT JUICE. AM. J. HYG. 34:79-81.

(1044) NICHOLSON, R. I., AND M. HORSLEY. 1959. IMPURITIES IN SUGAR PROCESSING: DETERMINATION OF DEXTRAN AND STARCH IN CANE JUICES AND SUGAR PRODUCTS. J. AGRIC. FOOD CHEM. 7(9):640-643.

(1045) RICHARDS, G. N., AND G. STOKIE. 1974. ANALYSIS OF DEXTRAN IN SUGAR--AN ENZYMIC METHOD. INT. SUGAR J. 76:103-107.

(1046) SCHNEIDER, F., E. REINEFELD, AND K. THIELECKE. 1971. [DETERMINATION OF DEXTRAN AND LEVAN IN TECHNICAL SUGAR JUICES] (IN GERMAN, ENGLISH ABSTRACT). Z. ZUCKERIND. 24(6):153-158. ALSO IN CHEM. ABSTR. 1971. 74:127935S.

(1047) TANTAOUI, M. 1952. DEXTRAN---ITS EFFECT ON POLARIZATION AND TRUE SUCROSE DETERMINATION IN SUGAR JUICE. SUGAR J. 15(6):36-38.

(1048) TU, C. C., AND R. H. OKAMOTO. 1963. SUGAR CRYSTAL ANALYSES. DETERMINATION OF POLYSACCHARIDES IN SUCROSE CRYSTAL. J. AGRIC. FOOD CHEM. 11:330-332.

SEE ALSO: 2335

D. Histochemical Detection of Dextran

(1049) FRIBERG, U., W. GRAF, AND B. ABERG. 1951. ON THE HISTOCHEMISTRY OF PARTLY HYDROLYZED, BACTERIAL DEXTRAN. SCAND. J. CLIN. LAB. INVEST. 3:221-227.

(1050) ------, W. GRAF, AND B. ABERG. 1952. HISTOCHEMISTRY OF DEXTRAN. (A REVIEW.) CONGR. INT. BIOCHIM. RESUMES COMMUN. 2ND. 355-356. ALSO IN CHEM. ABSTR. 1956. 50:5815C.

(1051) MANCINI, R. E., AND M. A. ETCHEVERRY. 1952. A NEW HISTOCHEMICAL REACTION FOR POLYSACCHARIDES. J. NAT. CANCER INST. 13:227-228.

(1052) MOWRY, R. W. 1952. HISTOCHEMICAL METHODS FOR WATER-SOLUBLE, ALCOHOL-INSOLUBLE POLYSACCHARIDES AND OTHER SUBSTANCES OXIDIZED TO ALDEHYDES BY PERIODIC ACID. J. NAT. CANCER INST. 13:230-231.

(1053) ------, J. B. LONGLEY, AND R. C. MILLICAN. 1952. HISTOCHEMICAL DEMONSTRATION OF INTRAVENOUSLY INJECTED DEXTRAN IN KIDNEY AND LIVER OF THE MOUSE. J. LAB. CLIN. MED. 39:211-217.

(1054) PERSSON, B. H. 1952. HISTOCHEMICAL STUDIES ON THE FATE OF PARENTERALLY ADMINISTERED DEXTRAN IN RABBITS. I. DEMONSTRATION OF DEXTRAN IN TISSUE SECTIONS. ACTA SOC. MED. UPS. 57(5-6):411-420.

(1055) RUNGE, H., H. EBNER, AND W. LINDENSCHMIDT. 1956. [ADVANTAGES OF A COMBINED ALCIAN BLUE-PERIODIC ACID-SCHIFF REACTION IN GYNECOLOGICAL HISTOPATHOLOGY] (IN GERMAN). DTSCH. MED. WOCHENSCHR. 81:1525-1529. ALSO IN CHEM. ABSTR. 1957. 51:11443I.

(1056) SHIMIZU, N., AND T. KURNAMOTO. 1952. A LEAD-TETRAACETATE-SCHIFF METHOD FOR POLYSACCHARIDE TISSUE SECTIONS. STAIN TECHNOL. 27:97-106. ALSO IN CHEM. ABSTR. 1952. 46:5113D.

(1057) SHUGAR, D., AND J. BARANOWSKA. 1957. GRAM STAINING OF EXTRACELLULAR MATERIAL. BIOCHIM. BIOPHYS. ACTA 23:227-228.

SEE ALSO: 1491 1492 1979 1985 THROUGH 1988
1996 2009

XIII. Dextran in analysis, separation, and concentration of other substances

A. Two-Phase Partition and Counter-current Distribution

(Selected references.)

(1058) ALBERTS, B. M. 1967. EFFICIENT SEPARATION OF SINGLE-STRANDED AND DOUBLE-STRANDED DEOXYRIBONUCLEIC ACID IN A DEXTRAN-POLYETHYLENE GLYCOL TWO-PHASE SYSTEM. BIOCHEMISTRY 6:2527-2532.

(1059) ------. 1967. FRACTIONATION OF NUCLEIC ACIDS BY DEXTRAN-POLYETHYLENE GLYCOL TWO-PHASE SYSTEMS. METHODS ENZYMOL. 12(A):566-581.

(1060) ALBERTSSON, P. A. 1958. FRACTIONATION OF PROTEINS IN LIQUID-POLYMER-POLYMER TWO-PHASE SYSTEMS. NATURE (LONDON) 182:709-711.

(1061) ------. 1958. PARTICLE FRACTIONATION IN LIQUID TWO-PHASE SYSTEMS. THE COMPOSITION OF SOME PHASE SYSTEMS AND THE BEHAVIOUR OF SOME MODEL PARTICLES IN THEM. APPLICATION TO THE ISOLATION OF CELL WALLS FROM MICROORGANISMS. BIOCHIM. BIOPHYS. ACTA 27:378-395.

(1062) ------ AND E. J. NYNS. 1959. COUNTER-CURRENT DISTRIBUTION OF PROTEINS IN AQUEOUS POLYMER PHASE SYSTEMS. NATURE (LONDON) 184:1465-1468.

(1063) ------. 1960. PARTITION OF CELL PARTICLES AND MACROMOLECULES: DISTRIBUTION AND FRACTIONATION OF CELLS, VIRUSES, MICROSOMES, PROTEINS, NUCLEIC ACIDS, AND ANTIGEN-ANTIBODY COMPLEXES IN AQUEOUS POLYMER TWO-PHASE SYSTEMS. ALMQVIST & WIKSELLS BOKTRYCKERI AB, UPPSALA; JOHN WILEY & SONS, INC., NEW YORK. 231 PP.

(1064) ------. 1972. PARTITION OF CELL PARTICLES AND MACROMOLECULES. 2ND EDITION. ALMQVISTOCH WIKSELL, STOCKHOLM. 324 PP. ALSO IN CHEM. ABSTR. 1972. 76:B150694N.

(1065) ------ AND G. FRICK. 1960. PARTITION OF VIRUS PARTICLES IN A LIQUID TWO-PHASE SYSTEM. BIOCHIM. BIOPHYS. ACTA 37:230-237.

(1066) ------ AND L. PHILIPSON. 1960. ANTIGEN-ANTIBODY IN LIQUID TWO-PHASE SYSTEMS: A METHOD FOR STUDYING IMMUNOLOGICAL REACTIONS. NATURE (LONDON) 185:38-40.

(1067) ------. 1961. PARTITION OF MACROMOLECULES IN AQUEOUS TWO-PHASE SYSTEMS. BIOL. STRUCT. FUNCT. PROC. IUB/IUBS INT. SYMP. 1ST. 1:33-40.

(1068) ------ AND E. J. NYNS. 1961. PARTITION OF PROTEINS IN AN AQUEOUS PHASE SYSTEM OF DEXTRAN AND POLYETHYLENE GLYCOL. INFLUENCE OF ELECTROLYTE CONTENT. ARK. KEMI 17(16):197-206.

(1069) ------. 1962. PARTITION METHODS FOR FRACTIONATION OF CELL PARTICLES AND MACROMOLECULES. METHODS BIOCHEM. ANAL. 10:229-262.

(1070) ------. 1967. TWO-PHASE SEPARATION OF VIRUSES. METHODS VIROLOGY 2:303-321.

(1071) ------. 1969. PARTITION IN POLYMER TWO-PHASE SYSTEMS; SOME RECENT RESULTS. PROG. SEP. PURIF. 2:105-120.

(1072) ------. 1970. PARTITION OF CELL PARTICLES AND MACROMOLECULES IN POLYMER TWO-PHASE SYSTEMS. (INCLUDES APPLICATIONS OF BATCH OPERATIONS TO PROTEINS AND NUCLEIC ACIDS, CELL PARTICLES, AND VIRUSES; AND OF COUNTERCURRENT DISTRIBUTION TO WHOLE CELLS, VIRUSES, ANTIGEN-ANTIBODY COMPLEXES, CHLOROPLASTS, AND PROTEINS AND NUCLEIC ACIDS.) ADV. PROTEIN CHEM. 24:309-341.

(1073) BAIRD, G. D., P. A. ALBERTSSON, AND B. VON HOFSTEN. 1961. SEPARATION OF BACTERIA BY COUNTER-CURRENT DISTRIBUTION. NATURE (LONDON) 192:236-239.

(1074) BENGTSSON, S., L. PHILIPSON, AND P. A. ALBERTSSON. 1962. COUNTER-CURRENT DISTRIBUTION OF POLIO VIRUS. BIOCHEM. BIOPHYS. RES. COMMUN. 9:318-322. ALSO IN VIROLOGY. 1963. 20:176-184.

(1075) CARLETON, L. T., AND T. CRUTCHFIELD. 1970. CONTINUOUS LIQUID PARTITION FOR SEPARATION OF BIOLOGICALS. IND. ENG. CHEM. PROCESS DES. DEV. 9:611-618.

(1076) FAVRE, J., AND D. E. PETTIJOHN. 1967. A METHOD FOR EXTRACTING PURIFIED DNA OR PROTEIN-DNA COMPLEX FROM ESCHERICHIA COLI. EUR. J. BIOCHEM. 3:33-41.

(1077) JOHANSSON, G. 1970. PARTITION OF SALTS AND THEIR EFFECTS ON PARTITION OF PROTEINS IN A DEXTRAN-POLY(ETHYLENE GLYCOL)-WATER TWO PHASE SYSTEM. BIOCHIM. BIOPHYS. ACTA 221:387-390.

(1078) LARSSON, C., C. COLLIN, AND P. A. ALBERTSSON. 1971. CHARACTERIZATION OF THREE CLASSES OF CHLOROPLASTS OBTAINED BY COUNTER-CURRENT DISTRIBUTION. BIOCHIM. BIOPHYS. ACTA 245:425-438.

(1079) MILLER, L. S., S. B. EVANS, J. L. ROSSIO, AND M. C. DODD. 1974. RAPID METHOD FOR THE ISOLATION OF PLASMA MEMBRANES FROM A MURINE FIBROSARCOMA USING AN AQUEOUS TWO-PHASE POLYMER SYSTEM. PREP. BIOCHEM. 4(6):489-498.

(1080) PETTIJOHN, D. E. 1967. A STUDY OF DNA, PARTIALLY DENATURED DNA AND PROTEIN-DNA-COMPLEXES IN THE POLYETHYLENEGLYCOL-DEXTRAN PHASE SYSTEM. EUR. J. BIOCHEM. 3:25-32.

(1081) ------. 1969. PARTITION OF NUCLEIC ACIDS IN POLYMER TWO-PHASE SYSTEM. PROG. SEP. PURIF. 2:147-166.

(1082) RUDIN, L., AND P. A. ALBERTSSON. 1967. A NEW METHOD FOR THE ISOLATION OF DEOXYRIBONUCLEIC ACID FROM MICROORGANISMS. BIOCHIM. BIOPHYS. ACTA 134:37-44.

(1083) RYDEN, J., AND P. A. ALBERTSSON. 1971. INTERFACIAL TENSION OF DEXTRAN-POLYETHYLENE GLYCOL-WATER TWO-PHASE SYSTEMS. J. COLLOID INTERFACE SCI. 37(1):219-222.

(1084) TISELIUS, A., J. PORATH, AND P. A. ALBERTSSON. 1963. SEPARATION AND FRACTIONATION OF MACROMOLECULES AND PARTICLES: NEW OR IMPROVED SEPARATION PROCEDURES UNDERLIE MANY IMPORTANT RECENT ADVANCES IN BIOCHEMISTRY. SCIENCE 141:13-20.

(1085) WALTER, H., E. J. KROB, R. GARZA, AND G. S. ASCHER. 1969. PARTITION AND COUNTERCURRENT DISTRIBUTION OF ERYTHROCYTES AND LEUKOCYTES FROM DIFFERENT SPECIES. EXP. CELL RES. 55:57-64. ALSO IN CHEM. ABSTR. 1969. 71:9725P.

(1086) ------. 1969. FACTORS IN THE PARTITION OF BLOOD CELLS IN AQUEOUS DEXTRAN-POLYETHYLENE GLYCOL TWO-PHASE SYSTEMS. PROG. SEP. PURIF. 2:121-145.

(1087) ------, M. H. EDGELL, AND C. A. HUTCHISON, III. 1970. SEPARATION OF BACTERIOPHAGE PHI-CHI-174 MUTANTS BY COUNTERCURRENT DISTRIBUTION IN A POLYMER TWO-PHASE SYSTEM. BIOCHIM. BIOPHYS. ACTA 204:248-251.

(1088) ------ AND S. SASAKAWA. 1971. PARTITION OF CLOSELY RELATED PROTEINS IN AQUEOUS TWO-PHASE SYSTEMS. HUMAN HEMOGLOBIN VARIANTS AND HEMOGLOBINS FROM DIFFERENT SPECIES. BIOCHEMISTRY 10:108-113.

(1089) ------, S. SASAKAWA, AND P. A. ALBERTSSON. 1972. CROSS-PARTITION OF PROTEINS. EFFECT OF IONIC COMPOSITION AND CONCENTRATION. BIOCHEMISTRY 11:3880-3883.

(1090) ------, R. TUNG, L. J. JACKSON, AND G. V. F. SEAMAN. 1972. NATURE OF THE CELL MEMBRANE CHARGE MEASURED BY PARTITION IN AQUEOUS TWO-POLYMER PHASE SYSTEMS. DIFFERENTIATION OF CLASSES OF BEEF ERYTHROCYTES. BIOCHEM. BIOPHYS. RES. COMMUN. 48:565-571.

(1091) ------, A. MILLER, E. J. KROB, AND G. S. ASCHER. 1972. MEMBRANE SURFACE PROPERTIES OF RETICULOCYTES FROM RATS RENDERED SEVERLY ANEMIC WITH PHENYLHYDRAZINE AS DETERMINED BY PARTITION IN AQUEOUS PHASE SYSTEMS. EXP. CELL RES. 73:145-153. ALSO IN CHEM. ABSTR. 1972. 77:59773X.

(1092) ------, E. J. KROB, D. E. BROOKS, AND G. V. F. SEAMAN. 1973. EFFECT OF ACETALDEHYDE AND GLUTARALDEHYDE FIXATION ON THE SURFACE PROPERTIES OF RED BLOOD CELLS AS DETERMINED BY PARTITION IN AQUEOUS PHASES. EXP. CELL. RES. 80:415-424. ALSO IN CHEM. ABSTR. 1973. 79:112125G.

(1093) ------, E. J. KROB, G. S. ASCHER, AND G. V. F. SEAMAN. 1973. PARTITION OF RAT LIVER CELLS IN AQUEOUS DEXTRAN--POLYETHYLENE GLYCOL PHASE SYSTEMS. EXP. CELL. RES. 82:15-26. ALSO IN CHEM. ABSTR. 1974. 80:12185D.

SEE ALSO: 1413

B. Miscellaneous

Density gradient and centrifugation techniques; microencapsulated activated charcoal.

(1094) BIRBECK, M. S. C., AND E. REID. 1956. A NEW MEDIUM FOR THE ISOLATION OF LIVER MITOCHONDRIA. BIOCHEM. BIOPHYS. ACTA 20:419-421.

(1095) CLARK, B., AND J. W. PORTEOUS. 1965. THE ISOLATION AND PROPERTIES OF EPITHELIAL-CELL 'GHOSTS' FROM RAT SMALL INTESTINE. BIOCHEM. J. 96:539-551.

(1096) DE HERTOGH, R., I. VAN DER HYDEN, AND E. EKKA. 1975. UNBOUND LIGAND ADSORPTION ON DEXTRAN-COATED CHARCOAL. PRACTICAL CONSIDERATIONS. J. STEROID BIOCHEM. 6(9):1333-1337. ALSO IN CHEM. ABSTR. 1975. 83:203468V.

(1097) KATOH, Y., J. TAKEZAWA, M. SUZUKI, AND OTHERS. 1975. SIMPLIFIED RADIOIMMUNOASSAY OF ADENOSINE 3',5'-MONOPHOSPHATE USING DEXTRAN-COATED CHARCOAL. RADIOISOTOPES 24(2):97-103. ALSO IN CHEM. ABSTR. 1975. 83:4254X.

(1098) MACH, O., AND L. LACKO. 1968. DENSITY GRADIENT IN A DEXTRAN MEDIUM. ANAL. BIOCHEM. 22:393-397.

(1099) MORISHITA, M., M. FUKUSHIMA, AND Y. INABA. 1973. MICROENCAPSULATION OF ACTIVATED CHARCOAL AND ITS BIOCHEMICAL APPLICATIONS. AM. CHEM. SOC. DIV. ORG. COAT. PLAST. CHEM. PAP. 33(2):603-610.

(1100) ------, M. FUKUSHIMA, AND Y. INABA. 1974. MICROENCAPSULATION OF ACTIVATED CHARCOAL AND ITS BIOLOGICAL APPLICATIONS. IN JAN E. VANDEGAER, MICROENCAPSULATION: PROCESSES AND APPLICATIONS, PP. 115-126. PLENUM PRESS, NEW YORK AND LONDON.

(1101) PERTOFT, H. 1966. GRADIENT CENTRIFUGATION IN COLLOIDAL SILICA-POLYSACCHARIDE MEDIA. BIOCHIM. BIOPHYS. ACTA 126:594-596.

(1102) PROSZYNSKA, K., AND B. SADOWSKA. 1974. ADSORPTION ONTO DEXTRAN-COATED CHARCOAL AS A RAPID METHOD FOR I-125 LABELLED INSULIN DAMAGE ASSESSMENT. CLIN. CHIM. ACTA 53:5-10. ALSO IN BIOLOG. ABSTR. 1974. 58:30772.

C. Concentration of Labile Substances

(1103) ALY, F. W. 1954. THE ELECTROPHORETICALLY ISOLATED FORE-FRACTION FROM LIQUOR CEREBROSPINALIS. BIOCHEM. Z. 325:505-514. ALSO IN CHEM. ABSTR. 1955. 49:472D.

(1104) ROSSI, G., AND G. SCHNEIDER. 1953. ELECTROPHORETIC INVESTIGATION OF PATHOLOGICAL CEREBROSPINAL FLUID. KLIN. WOCHENSCHR. 31:969-975. ALSO IN CHEM. ABSTR. 1954. 48:2885E.

(1105) SCHNEIDER, G., AND G. WALLENIUS. 1951. ELECTROPHORETIC STUDIES ON CEREBROSPINAL FLUID PROTEINS. SCAND. J. CLIN. LAB. INVEST. 3:145-150. ALSO IN CHEM. ABSTR. 1951. 45:10340C.

SEE ALSO: 1295

XIV. Derivatives other than sulfates

A. Miscellaneous Derivatives

Preparation, characterization, structure, and chemical and biochemical reactions.

(1106) ANTONINI, E., L. BELLELLI, M. R. BRUZZESI, AND OTHERS. 1965. [DEXTRAN AND ITS DERIVATIVES. III. PREPARATION AND PROPERTIES OF CARBOXYMETHYL AND DIETHYLAMINOETHYL DERIVATIVES OF NATIVE DEXTRAN] (IN ITALIAN). G. BIOCHIM. 14(2):88-98. ALSO IN CHEM. ABSTR. 1965. 63:4375H.

(1107) ------, L. BELLELLI, M. R. BRUZZESI, AND OTHERS. 1965. STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. III. PREPARATION AND PROPERTIES OF CARBOXYMETHYL AND DIETHYLAMINOETHYL DERIVATIVES OF NATIVE DEXTRAN. ITAL. J. BIOCHEM. 14:90-100.

(1108) ------, L. BELLELLI, M. R. BRUZZESI, AND OTHERS. 1965. [STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. III. PREPARATION AND PROPERTIES OF CARBOXYMETHYL AND DIETHYLAMINOETHYL DERIVATIVES OF NATIVE DEXTRAN] (IN RUSSIAN). IN "PROBLEMS ON EVOLUTIONARY AND TECHNICAL BIOCHEMISTRY, PP. 296-303. IN HONOR OF THE 70TH BIRTHDAY OF MEMBER OF THE ACADEMY A. I. OPARIN." ACADEMY OF SCIENCES USSR. PUBLISHING HOUSE, SCIENCE, MOSCOW.

(1109) BARKER, S. A., H. M. DISNEY, AND P. J. SOMERS. 1972. THE REACTION OF DEXTRAN CARBONATE WITH AMINO ACIDS AND POLYPEPTIDES. CARBOHYDR. RES. 25:237-241.

(1110) BOEHME, H. J., G. KOPPERSCHLAEGER, J. SCHULZ, AND E. HOFMANN. 1972. AFFINITY CHROMATOGRAPHY OF PHOSPHOFRUCTOKINASE USING CIBACRON BLUE. (STRUCTURE OF BLUE DEXTRAN 2000.) J. CHROMATOGR. 69:209-214.

(1111) BOMBARDIERI, G., G. ROTILIO, C. CRIFO, AND C. DEMARCO. 1968. STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES XIV. METAL BINDING PROPERTIES OF SUCCINYL- AND PHYTALYL-DEXTRANS. ARCH. BIOCHEM. BIOPHYS. 127:766-769.

(1112) CHERNOV, G. A., A. N. SHEVCHENKO, K. P. KHOMYAKOV, AND A. D. VIRNIK. 1971. [TOXICITY AND RADIOPROTECTIVE PROPERTIES OF SEROTONIN-CONTAINING DEXTRAN DERIVATIVES] (IN RUSSIAN). FARMAKOL. TOKSIKOL. MOSCOW 34(3):328-330. ALSO IN CHEM. ABSTR. 1971. 75:59447C.

(1113) DEBELDER, A. N., B. LINDBERG, AND S. SVENSSON. 1968. SYNTHESIS OF KETODEXTRANS. ACTA CHEM. SCAND. 22:949-952.

(1114) ------ AND B. NORRMAN. 1968. THE DISTRIBUTION OF SUBSTITUENTS IN PARTIALLY ACETYLATED DEXTRAN. CARBOHYDR. RES. 8:1-6.

(1115) ------ AND B. NORRMAN. 1969. THE SUBSTITUTION PATTERNS OF O-(2-HYDROXYETHYL) STARCH AND O-(2-HYDROXYETHYL)DEXTRAN. CARBOHYDR. RES. 10:391-394.

(1116) ------ AND K. A. GRANATH. 1973. PREPARATION AND PROPERTIES OF FLUORESCEIN-LABELLED DEXTRANS. CARBOHYDR. RES. 30:375-378.

(1117) DEMARCO, C., G. BOMBARDIERI, M. R. BRUZZESI, AND A. ROSSI-FANELLI. 1965. PREPARATION OF A MIXED DISULFIDE BETWEEN MERCAPTO-SUCCINYL-DEXTRAN AND CYSTEAMINE. ITAL. J. BIOCHEM. 14:39-43.

(1118) DOANE, W. M., B. S. SHASHA, E. I. STOUT, AND OTHERS. 1968. REACTION OF STARCH WITH CARBOHYDRATE TRANS-CARBONATES. CARBOHYDR. RES. 8:266-274.

(1119) ERNST, B., W. BOSTELMANN, AND C. ENGELMANN. 1969. [IODINE-LABELED DEXTRAN FOR ELECTRON-MICROSCOPIC DEMONSTRATION OF TRANSPORT PROCESSES] (IN GERMAN). ACTA BIOL. MED. GER. 23(2):345-350. ALSO IN CHEM. ABSTR. 1970. 72:51631A.

(1120) GALLO, A., AND A. VERCELLONE. 1957. PHOSPHORIC ACID ESTERS OF DEXTRAN. CHIM. IND. MILAN 39:1-5. ALSO IN CHEM. ABSTR. 1957. 51:9731F.

(1121) ------. 1961. [ANTICOAGULANT PRODUCTS WITH CLARIFYING ACTIVITY TOWARD PLASMA LIPIDS. III. PHOSPHORIC ESTERS OF DEPOLYMERIZED DEXTRAN] (IN ITALIAN). G. BIOCHIM. 10:366-372. ALSO IN CHEM. ABSTR. 1962. 57:7593C.

(1122) ------. 1961. [ANTICOAGULANT PRODUCTS WITH CLARIFYING ACTIVITY TOWARD PLASMA LIPIDS. IV. SUCCINIC ESTERS OF DEXTRAN AND PECTIN] (IN ITALIAN). G. BIOCHIM. 10:373-379. ALSO IN CHEM. ABSTR. 1962. 57:7593C.

(1123) GHANTA, V. K., N. M. HAMLIN, AND R. N. HIRAMOTO. 1973. USE OF FLUORESCEIN CONJUGATED DEXTRAN FOR THE DETECTION OF MOPC 104E TUMOR CELLS. IMMUNOCHEMISTRY 10:51-53.

(1124) GRISHIN, G. I. 1969. [INTERACTION OF ANTIBIOTICS AND MICROBIC POLYSACCHARIDES STUDIED BY PAPER ELECTROPHORESIS] (IN RUSSIAN). TR. LENINGR. KHIM. FARM. INST. 27:113-118. ALSO IN CHEM. ABSTR. 1972. 76:89985Q.

(1125) HORNUFF, G. V. 1963. [USE OF MODEL PRODUCTS FOR STUDYING REACTIVE PROCESSES ON FIBERS] (IN GERMAN). ABH. DTSCH. AKAD. WISS. BERLIN KL. CHEM. GEOL. BIOL. 1:109-122. ALSO IN CHEM. ABSTR. 1964. 60:14658G.

(1126) JEANES, A., AND C. A. WILHAM. 1952. DEXTRAN TRIACETATES. J. AM. CHEM. SOC. 74:5339-5341.

(1127) ------, C. A. WILHAM, AND G. E. HILBERT. 1953. ACETOBROMINOLYSIS OF DI- AND POLYSACCHARIDE ACETATES. J. AM. CHEM. SOC. 75:3667-3673.

(1128) JELLUM, E., J. AASETH, AND L. ELDJARN. 1973. MERCAPTODEXTRAN, A METAL-CHELATING AND DISULPHIDE-REDUCING POLYTHIOL OF HIGH MOLECULAR WEIGHT. BIOCHEM. PHARMACOL. 22:1179-1188.

(1129) JONES, A. S., M. A. G. KAYE, AND M. STACEY. 1952. THE CONDENSATION OF LONG-CHAIN FATTY ACIDS WITH POLYSACCHARIDES AND PROTEINS. J. CHEM. SOC. (LONDON) 5016-5020.

(1130) KEILICH, G., K. TIHLARIK, AND E. HUSEMANN. 1968. [PREPARATION OF TRIS-O-METHYLSILYL POLYSACCHARIDES] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 120:87-95.

(1131) ------, P. SALMINEN, AND E. HUSEMANN. 1971. [PERMETHYLATION OF POLYSACCHARIDES] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 141:117-125.

(1132) ------, N. FRANK, AND E. HUSEMANN. 1975. [BENZYLATION OF POLYSACCHARIDES IN THE PRESENCE OF METHYLSULFINYLMETHANIDE] (IN GERMAN, ENGLISH SUMMARY). MAKROMOL. CHEM. 176:3269-3285.

(1133) KENNEDY, J. F. 1974. CHEMICALLY REACTIVE DERIVATIVES OF POLYSACCHARIDES. ADV. CARBOHYDR. CHEM. BIOCHEM. 29:305-405.

(1134) KHOMYAKOV, K. P., M. A. PENENZHIK, A. D. VIRNIK, AND Z. A. ROGOVIN. 1965. [SYNTHESIS OF DIALDEHYDE AND DICARBOXY-DEXTRAN] (IN RUSSIAN). VYSOKOMOL. SOEDIN. 7(6):1030-1034. ALSO IN CHEM. ABSTR. 1965. 63:11681A.

(1135) ------, A. D. VIRNIK, N. S. USAKOV, AND Z. A. ROGOVIN. 1965. [SYNTHESIS OF POLYMERIC MEDICINALS BASED ON DEXTRAN-DERIVATIVES] (IN RUSSIAN). VYSOKOMOL. SOEDIN. 7(6):1035-1040. ALSO IN CHEM. ABSTR. 1965. 63:16134A.

(1136) ------, A. D. VIRNIK, S. N. USHAKOV, AND Z. A. ROGOVIN. 1965. [THE SYNTHESIS OF THE ESTER OF DEXTRAN AND PELENTANIC ACID] (IN RUSSIAN). KHIM. PRIR. SOEDIN. (4):245-246. ALSO IN CHEM. ABSTR. 1966. 64:789D.

(1137) ------, A. D. VIRNIK, AND Z. A. ROGOVIN. 1966. [THE SYNTHESIS OF SULFOPROPYL AND 3-CHLORO-2-HYDROXYPROPYL ETHERS OF DEXTRAN] (IN RUSSIAN). KHIM. PRIR. SOEDIN. 2(3):213-214. ALSO IN CHEM. ABSTR. 1966. 65:17034F.

(1138) KLOTZ, I. M., AND V. H. STRYKER. 1959. INTRODUCTION OF SULFHYDRYL GROUPS INTO MACROMOLECULES. BIOCHEM. BIOPHYS. RES. COMMUN. 1:119-123.

(1139) ------ AND B. R. CARVER. 1961. A SPECTROPHOTOMETRIC TITRATION FOR THE DETERMINATION OF SULFHYDRYL GROUPS. ARCH. BIOCHEM. BIOPHYS. 95:540-546.

(1140) KOZULITSYNA, T. I., A. D. VIRNIK, K. P. KHOMYAKOV, AND OTHERS. 1968. [BACTERIOSTATIC PROPERTIES OF SOME DEXTRAN DERIVATIVES LINKED WITH TABAZID] (IN RUSSIAN). VOP. MED. KHIM. 14(4):375-378. ALSO IN CHEM. ABSTR. 1968. 69:66052Z.

(1141) KWEI, K-P. S., AND F. R. EIRICH. 1961. GRAFT COPOLYMERS OF VINYL PYRROLIDONE ON DEXTRAN. J. POLYM. SCI. 53:81-85.

(1142) ------ AND F. R. EIRICH. 1962. CHAIN TRANSFER CONSTANT OF VINYLPYRROLIDONE WITH DEXTRAN. J. PHYS. CHEM. 66:828-829.

(1143) LALETINA, O. P., A. D. VIRNIK, AND Z. A. ROGOVIN. 1968. [SYNTHESIS OF WATER-SOLUBLE GRAFT COPOLYMERS OF DEXTRAN AND POLY(2-METHYL-5-VINYLPYRIDINE)] (IN RUSSIAN). VYSOKOMOL. SOEDIN. SER. B. 10(9):693-696. ALSO IN CHEM. ABSTR. 1969. 70:12348C.

(1144) ------, A. D. VIRNIK, AND Z. A. ROGOVIN. 1968. [SYNTHESIS OF WATER-SOLUBLE DEXTRAN DERIVATIVES CONTAINING COMPLEXING GROUPS] (IN RUSSIAN). VYSOKOMOL. SOEDIN. SER. B. 10(9):708-712. ALSO IN CHEM. ABSTR. 1969. 70:4892K.

(1145) LINDBERG, B., AND S. SVENSSON. 1970. SYNTHESIS OF XYLO- AND MANNODEXTRAN. ACTA CHEM. SCAND. 24:711-713.

(1146) MAEDA, H., AND N. ISHIDA. 1967. SPECIFICITY OF BINDING OF HEXOPYRANOSYL POLYSACCHARIDES WITH FLUORESCENT BRIGHTENER. J. BIOCHEM. 62:276-278.

(1147) MARSHALL, J. J. 1970. COMMENTS ON THE USE OF BLUE DEXTRAN IN GEL CHROMATOGRAPHY. J. CHROMATOGR. 53:379-380.

(1148) MCCORMICK, J. E. 1966. PROPERTIES OF PERIODATE-OXIDISED POLYSACCHARIDES. PART VII. THE STRUCTURE OF NITROGEN-CONTAINING DERIVATIVES AS DEDUCED FROM A STUDY OF MONOSACCHARIDE ANALOGUES. J. CHEM. SOC. SEC. C. 2121-2127.

(1149) MESTER, L., AND E. MOCZAR. 1956. PREPARATION OF TETRAZOLIUM DERIVATIVES OF POLYSACCHARIDES. CHEM. IND. (LONDON) (32):848-849.

(1150) MILLER, J. N. 1972. ORANGE DEXTRAN AS A VOID VOLUME MARKER IN THIN-LAYER GEL CHROMATOGRAPHY. J. CHROMATOGR. 74:355-356.

(1151) MINO, G., AND S. KAIZERMAN. 1960. A NEW METHOD FOR THE PREPARATION OF GRAFT COPOLYMERS. POLYMERIZATION INITIATED BY CERIC ION REDOX SYSTEMS. J. POLYM. SCI. 31:242-243.

(1152) MIODUSZEWSKI, J. Z. 1969. [DEXTRAN PREPARATIONS MANUFACTURED IN POLAND AND CERTAIN NEW DEXTRAN DERIVATIVES] (IN POLISH). POL. TYG. LEK. 24:1048-1050. ALSO IN CHEM. ABSTR. 1970. 73:7173Z.

(1153) MOYER, J. D., AND H. S. ISBELL. 1958. CARBON-14 CARBOXY-LABELLED POLYSACCHARIDES. J. RES. NATL. BUR. STAND. 61:71-73.

(1154) MUSTAFA, A., A. F. DAWOUD, AND A. MARAWAN. 1970. NITRATABILITY OF DEXTRANS. STAERKE 22:17-20.

(1155) NORRMAN, B. 1968. PARTIAL METHYLATION OF DEXTRAN. ACTA CHEM. SCAND. 22:1381-1385.

(1156) ------. 1968. PARTIAL METHYLATION STUDIES ON PUSTULAN, METHYL ALPHA- AND BETA-D-GLUCOPYRANOSIDE AND SOME DERIVATIVES. ACTA CHEM. SCAND. 22:1623-1627.

(1157) ------. 1969. DISTRIBUTION OF SUBSTITUENTS IN HYDROXYETHYLSTARCH AND HYDROXYETHYLDEXTRAN. SVEN. PAPPERSTIDN. 72:50.

(1158) PAPINI, P., M. FEROCI, AND G. AUZZI. 1969. [DEXTRAN DEPOLYMERIZATION AND DESCRIPTION OF SEVERAL DERIVATIVES] (IN ITALIAN). ANN. CHIM. ROME 59(10):890-901. ALSO IN CHEM. ABSTR. 1970. 72:56959Y.

(1159) PASIKA, W. M., AND L. H. CRAGG. 1965. VISCOSITY BEHAVIOR OF BRANCHED AND LINEAR POTASSIUM CARBOXYMETHYL DEXTRANS. J. POLYM. SCI. PART A 3:1391-1399.

(1160) ------ AND L. H. CRAGG. 1965. SEMIQUANTITATIVE ASPECT OF SHORT-BRANCH DETECTION BY USING POLYELECTROLYTE EXPANSION EFFECTS. J. POLYM. SCI. PART A 3:2527-2533.

(1161) PAVLENKO, A. F., AND Y. S. OVODOV. 1970. POLYACRYLAMIDE GEL ELECTROPHORESIS AND GEL FILTRATION OF DYED POLYSACCHARIDES. J. CHROMATOGR. 52:165-168.

(1162) RICKETTS, C. R. 1961. THE CHEMISTRY OF DEXTRANS. (A REVIEW, INCLUDING METAL COMPLEXES.) PROG. ORG. CHEM. 5:73-95.

(1163) ------. 1966. ISOTOPICALLY LABELLED MACROMOLECULES IN BIOLOGICAL RESEARCH: DEXTRAN LABELLED WITH RADIOACTIVE IODINE. NATURE (LONDON) 210:1113-1115.

(1164) ROGOVIN, Z. A., A. D. VIRNIK, K. P. KHOMYAKOV, AND OTHERS. 1972. STUDY OF THE SYNTHESIS OF DEXTRAN DERIVATIVES. (A REVIEW INCLUDING REFERENCES TO ORIGINAL RUSSIAN PUBLICATIONS.) J. MACROMOL. SCI. CHEM. A6(3):569-593.

(1165) SCOTT, J. E. 1967. BISULFITE ADDITION COMPOUNDS OF PERIODATE-OXIDISED POLYSACCHARIDES: ELECTROPHORETIC MOBILITY, AND PRECIPITATION BY CETYLPYRIDINIUM AND OTHER CATIONS. CHEM. IND. (LONDON) (23):953-954.

(1166) SHEN, K. P., AND F. R. EIRICH. 1960. GRAFT COPOLYMERS OF VINYLPYRROLIDINONE ON DEXTRAN. MEZHDUNAR. SIMP. MAKROMOL. KHIM. DOKL. AVTOREFERATY 1:323-327. ALSO IN CHEM. ABSTR. 1961. 55:11915E.

(1167) SMIDSROED, O., A. HAUG, AND B. LARSEN. 1966. THE INFLUENCE OF PH ON THE RATE OF HYDROLYSIS OF ACIDIC POLYSACCHARIDES. ACTA CHEM. SCAND. 20:1026-1034.

(1168) ------ AND A. HAUG. 1967. PRECIPITATION OF ACIDIC POLYSACCHARIDES BY SALTS IN ETHANOL-WATER MIXTURES. J. POLYM. SCI. PART C. 16:1587-1598.

(1169) SNEZHKO, V. A., L. N. SAMOILOVA, K. P. KHOMYAKOV, AND OTHERS. 1972. [THE EFFECT OF THE TYPE OF CHEMICAL BONDS BETWEEN DEXTRAN DERIVATIVES AND ANTIBIOTICS ON BACTERIOSTATIC ACTIVITY OF POLYMER COMPOUNDS] (IN RUSSIAN). ANTIBIOTIKI 17(1):48-52. ALSO IN CHEM. ABSTR. 1972. 76:122270C.

(1170) ------, K. P. KHOMYAKOV, V. P. KOMAR, AND OTHERS. 1975. [SYNTHESIS OF IODO- AND AMINODEOXY DERIVATIVES OF DEXTRAN ACCORDING TO THE NUCLEOPHILIC SUBSTITUTION REACTION] (IN RUSSIAN). ZH. PRIKL. KHIM. LENINGRAD 48(7):1540-1544. ALSO IN CHEM. ABSTR. 1975. 83:195619C.

(1171) ------, K. P. KHOMYAKOV, A. D. VIRNIK, AND Z. A. ROGOVIN. 1975. [SYNTHESIS OF DEXTRAN DERIVATIVES CONTAINING CARBONYL GROUPS] (IN RUSSIAN). IZV. VYSSH. UCHEBN. ZAVED. KHIM. KHIM. TECKHNOL. 18(9):1384-1387. ALSO IN CHEM. ABSTR. 1976. 84:6822A.

(1172) SOERENSEN, K. H. 1955. DEXTRAN GLYCEROL GLYCOSIDE: EFFECT AS PLASMA SUBSTITUTE AND FATE IN ORGANISMS. DAN. MED. BULL. 2:111-116.

(1173) SVENSSON, S., G. VICARI, AND S. WILKINSON. 1976. AN IMPROVED METHOD FOR SYNTHESISING O-STEAROYLDEXTRAN FOR THE DETECTION OF PLAQUE FORMING CELLS SPECIFIC FOR THE ALPHA-(1-6) DETERMINANT. (PREPARATION OF DEXTRAN PHENYLBORONATE ALSO DESCRIBED.) J. IMMUNOL. METHODS 9:315-321.

(1174) TRIMNELL, D., B. S. SHASHA, W. M. DOANE, AND C. R. RUSSELL. 1973. THIOLATION OF STARCH AND OTHER POLYSACCHARIDES. J. APPL. POLYM. SCI. 17:1607-1615.

(1175) TUBIS, M., K. PARSONS, J. S. ENDOW, AND OTHERS. 1967. THE PREPARATION OF LABELED CARBOHYDRATES FOR BIOMEDICAL USES. J. NUCL. MED. 8:551-557.

(1176) WALLACE, R. A., AND D. G. YOUNG. 1966. GRAFT POLYMERIZATION KINETICS OF ACRYLAMIDE INITIATED BY CERIC NITRATE-DEXTRAN REDOX SYSTEMS. J. POLYM. SCI. CHEM. ED. 4:1179-1190.

(1177) WHISTLER, R. L., P. K. CHANG, AND G. N. RICHARDS. 1959. ALKALINE DEGRADATION OF PERIODATE-OXIDIZED XYLAN AND DEXTRAN. J. AM. CHEM. SOC. 81:4058-4060.

(1178) ------. 1969. STARCH PHOSPHATES. (DEXTRAN INCLUDED.) DEMPUN KOGYO GAKKAISHI 17(1):41-49. ALSO IN CHEM. ABSTR. 1970. 72:113020M.

(1179) ------ AND G. A. TOWLE. 1969. PREPARATION AND CHARACTERIZATION OF POLYSACCHARIDE PHOSPHATES. ARCH. BIOCHEM. BIOPHYS. 135:396-401.

(1180) WOLFF, I. A., AND C. E. RIST. 1948. POLYSACCHARIDE ARYL CARBAMATES. J. AM. CHEM. SOC. 70:2779-2782.

(1181) ------, P. R. WATSON, AND C. E. RIST. 1953. POLYSACCHARIDE ARYL CARBAMATES. III. TRICARBANILATES OF POLYGLUCOSANS WITH VARIOUS GLUCOSIDIC LINKAGES. J. AM. CHEM. SOC. 75:4897-4899.

(1182) WOLFROM, M. L., A. CHANEY, AND K. S. ENNOR. 1959. THE CONTROLLED THERMAL DECOMPOSITION OF CELLULOSE NITRATE. VI. OTHER POLYMERIC NITRATES. J. AM. CHEM. SOC. 81:3469-3473.

(1183) ZAVADA, O. A., A. D. VIRNIK, K. P. KHOMYAKOV, AND Z. A. ROGOVIN. 1966. [SYNTHESIS OF MERCAPTOETHYL DERIVATIVE OF DEXTRAN] (IN RUSSIAN). KHIM. PRIR. SOEDIN. 2(6):437-438. ALSO IN CHEM. ABSTR. 1967. 67:12790D.

(1184) ZITKO, V., AND C. T. BISHOP. 1966. OXIDATION OF POLYSACCHARIDES BY LEAD TETRAACETATE IN DIMETHYL SULFOXIDE. CAN. J. CHEM. 44:1749-1756.

SEE ALSO: 313 402 433 783 1274 1275 1281 1411 1412 1452 1456 1676 1697

B. Miscellaneous Derivatives

Physicochemical studies and measurements.

(1185) BITTIGER, H., AND G. KEILICH. 1969. ORD AND CD MEASUREMENTS ON SUBSTITUTED POLYSACCHARIDES. ANGEW. CHEM. INT. ED. ENGL. 8:386-387.

(1186) DAWOUD, A. F., AND A. MARAWAN. 1973. AN INFRARED STUDY OF VARIOUS NITRATED POLYSACCHARIDES AND THEIR STRUCTURAL CHARACTERISATION. CARBOHYDR. RES. 26:65-70.

(1187) FRIEBOLIN, H., G. KEILICH, AND E. SIEFERT. 1969. PROTON MAGNETIC RESONANCE STUDIES ON POLYSACCHARIDE DERIVATIVES. ANGEW. CHEM. INT. ED. ENGL. 8:766-767.

(1188) GEKKO, K., AND H. NOGUCHI. 1974. HYDRATION BEHAVIOR OF IONIC DEXTRAN DERIVATIVES. MACROMOLECULES 7:224-228.

(1189) ------ AND H. NOGUCHI. 1975. POTENTIOMETRIC STUDIES ON HYDROPHOBIC EFFECT ON ION BINDING OF IONIC DEXTRAN DERIVATIVES. BIOPOLYMERS 14:2555-2565.

(1190) JENSEN, C. E., AND K. MARCKER. 1958. INVESTIGATIONS ON THE OSMOTIC PRESSURE OF AQUEOUS SOLUTIONS OF DEXTRAN GLYCEROL GLYCOSIDE AND OF POTASSIUM HYALURONATE. ACTA CHEM. SCAND. 12:855-860.

(1191) KEILICH, G., E. SIEFERT, AND H. FRIEBOLIN. 1971. [PROTON RESONANCE STUDIES ON POLYSACCHARIDES--III: AMYLOSE- AND DEXTRAN DERIVATIVES] (IN GERMAN). ORG. MAGN. RESON. 3:31-36.

(1192) KOMAR, V. P., K. P. KHOMYAKOV, A. D. VIRNIK, AND OTHERS. 1966. [A STUDY OF DEXTRAN AND SOME OF ITS DERIVATIVES BY INFRARED SPECTROSCOPY] (IN RUSSIAN). VYSOKOMOL. SOEDIN. 8(2):287-292. ALSO IN CHEM. ABSTR. 1966. 64:19739D.

(1193) ------, R. G. ZHBANKOV, K. P. KHOMYAKOV, AND OTHERS. 1968. [NEW DEXTRAN DERIVATIVES STUDIED BY IR SPECTROSCOPY] (IN RUSSIAN). VYSOKOMOL. SOEDIN. SER. A. 10(5):1164-1169. ALSO IN CHEM. ABSTR. 1968. 69:37261M.

(1194) MUKHERJEE, S., A. SARKO, AND R. H. MARCHESSAULT. 1972. FAR-ULTRAVIOLET OPTICAL ACTIVITY OF SACCHARIDE DERIVATIVES. II. DEXTRAN, AMYLOSE, AND MYCODEXTRAN ACETATES; DEXTRAN AND AMYLOSE XANTHATES. BIOPOLYMERS 11:303-314.

(1195) NOGUCHI, H., K. GEKKO, AND S. MAKINO. 1973. INTERACTION OF SODIUM AND POTASSIUM IONS WITH IONIC DEXTRAN DERIVATIVES IN AQUEOUS SOLUTION WITH AND WITHOUT ADDED SALT. MACROMOLECULES 6:438-442.

(1196) SMIDSROED, O. 1971. ESTIMATION OF THE RELATIVE STIFFNESS OF THE MOLECULAR CHAIN IN POLYELECTROLYTES FROM VISCOSITY MEASUREMENTS AT DIFFERENT IONIC STRENGTHS. COMPARISON OF POLYCATIONS AND POLYANIONS. ACTA CHEM. SCAND. 25:2770-2771.

(1197) ------ AND A. HAUG. 1971. ESTIMATION OF THE RELATIVE STIFFNESS OF THE MOLECULAR CHAIN IN POLYELECTROLYTES FROM MEASUREMENTS OF VISCOSITY AT DIFFERENT IONIC STRENGTHS. BIOPOLYMERS 10:1213-1227.

(1198) WALL, R. A., AND S. S. WINTER. 1957. THE VISCOSITY OF DILUTE SOLUTIONS OF SODIUM CARBOXYMETHYL DEXTRAN. J. POLYM. SCI. 26:245-246.

(1199) WINTER, S. S., C. D. BECKMANN. 1956. THE INFLUENCE OF STRUCTURE UPON THE VISCOUS BEHAVIOR OF SOME CARBOXYMETHYL POLYSACCHARIDES. J. PHYS. CHEM. 60:883-890.

(1200) ------ AND L. A. PAPAZIAN. 1957. THE VISCOSITY OF CARBOXYMETHYLDEXTRAN IN DILUTE HCL SOLUTIONS. J. PHYS. CHEM. 61:1142-1144.

SEE ALSO: 806 828 858 877 879 895 990

C. Diethylaminoethyl-Dextran (Selected References)

Preparation, characterization, and biological activity.

(1201) DUDMAN, W. F. 1972. DETECTION OF ACIDIC POLYSACCHARIDES IN GELS BY DEAE-DEXTRAN. ANAL. BIOCHEM. 46:668-690.

(1202) FAYET, M. T. 1967. [INCREASE OF THE INFECTIVE POWER OF FOOT AND MOUTH DISEASE VIRAL RNA BY THE ADDITION OF DIETHYLAMINOETHYL-DEXTRAN] (IN FRENCH). C. R. HEBD. SEANCES ACAD. SCI. SER. D. 264(5):783-784. ALSO IN CHEM. ABSTR. 1967. 66:83227R.

(1203) FIALA, M., AND B. SALTZMAN. 1969. ENHANCEMENT OF THE INFECTIVITY OF RHINOVIRUS RIBONUCLEIC ACID BY DIETHYLAMINOETHYL-DEXTRAN. APPL. MICROBIOL. 17:190-191.

(1204) GAZDAR, A. F., E. RUSSELL, AND R. H. BASSIN. 1971. IN VIVO ENHANCEMENT OF A MURINE SARCOMA VIRUS BY DIETHYLAMINOETHYL-DEXTRAN. PROC. SOC. EXPT. BIOL. MED. 137:310-314.

(1205) GUBENSEK, F., AND S. LAPANJE. 1967. ACTIVITY COEFFICIENTS OF COUNTERIONS IN SOLUTIONS OF DIETHYLAMINOETHYL-DEXTRAN HYDROCHLORIDE. BIOPOLYMERS 5:351-358.

(1206) ------ AND S. LAPANJE. 1968. POTENTIOMETRIC TITRATION STUDIES OF DIETHYLAMINOETHYL-DEXTRAN BASE. J. MACROMOL. SCI. CHEM. A2:1045-1054.

(1207) KUNIN, C. M., AND T. TUPASI. 1970. NON-ANTIGEN ANTIBODY PRECIPITIN REACTIONS OBSERVED WITH DEXTRAN SULFATE, DEAE-DEXTRAN, ANTIBIOTICS, PROTEINS, AND PHOSPHOLIPIDS. PROC. SOC. EXPT. BIOL. MED. 133:858-861.

(1208) LARSEN, B., AND E. B. THORLING. 1969. INHIBITORY EFFECT OF DEAE-DEXTRAN ON TUMOR GROWTH. I. ACTION OF DEXTRAN SULPHATE AFTER "IN VITRO" INCUBATION. ACTA PATHOL. MICROBIOL. SCAND. 75:229-236. ALSO IN CHEM. ABSTR. 1969. 70:85917X.

(1209) MAES, R., W. D. SEDWICK, AND A. VAHERI. 1967. INTERACTION BETWEEN DEAE-DEXTRAN AND NUCLEIC ACIDS. BIOCHIM. BIOPHYS. ACTA 134:269-276.

(1210) MAY, E., P. MAY, AND R. CASSINGENA. 1969. INTERACTIONS BETWEEN DIETHYLAMINOETHYL-DEXTRAN AND DNA. BIOCHIM. BIOPHYS. ACTA 185:136-144.

(1211) MCCUTCHAN, J. H., AND J. S. PAGANO. 1968. ENHANCEMENT OF THE INFECTIVITY OF SIMIAN VIRUS 40 DEOXYRIBONUCLEIC ACID WITH DIETHYLAMINOETHYL-DEXTRAN. J. NAT. CANCER INST. 41(2):351-357.

(1212) MCKERNAN, W. M., AND C. R. RICKETTS. 1959. A BASIC DERIVATIVE OF DEXTRAN AND ITS INTERACTION WITH BIOLOGICAL SYSTEMS. CHEM. IND. (LONDON) (47):1490-1491.

(1213) ------ AND C. R. RICKETTS. 1960. A BASIC DERIVATIVE OF DEXTRAN AND ITS INTERACTION WITH SERUM ALBUMIN. (PREPARATION AND CHARACTERIZATION.) BIOCHEM. J. 76:117-120.

(1214) MERRIL, C. R., AND M. GEIER. 1970. EFFECT OF FREEZING AND DEAE-DEXTRAN IN SPHEROPLAST ASSAYS. VIROLOGY 42(3):780-782.

(1215) PAGANO, J. S., J. H. MCCUTCHAN, AND A. VAHERI. 1967. FACTORS INFLUENCING THE ENHANCEMENT OF THE INFECTIVITY OF POLIOVIRUS RIBONUCLEIC ACID BY DIETHYLAMINOETHYL-DEXTRAN. J. VIROL. 1:891-897. ALSO IN CHEM. ABSTR. 1967. 67:114438N.

(1216) ------ AND J. H. MCCUTCHAN. 1969. ENHANCEMENT OF VIRAL INFECTIVITY WITH DEAE [DIETHYLAMINOETHYL]-DEXTRAN: APPLICATION TO DEVELOPMENT OF VACCINES. PROGR. IMMUNOBIOL. STAND. 3:152-158. ALSO IN CHEM. ABSTR. 1971. 75:40292B.

(1217) PHARMACIA FINE CHEMICALS. 1959-1974. LITERATURE REFERENCE LIST: SEPHADEX, SEPHADEX ION EXCHANGERS, SEPHAROSE, CNBR-ACTIVATED SEPHAROSE, DEXTRAN FRACTIONS, DEXTRAN DERIVATIVES. (A COMPREHENSIVE BIBLIOGRAPHY ISSUED YEARLY.) UPPSALA, SWEDEN, AND PISCATAWAY, NEW JERSEY, USA.

(1218) ------. 1971. DEXTRAN FRACTIONS, DEXTRAN SULFATE, DEAE-DEXTRAN: DEFINED POLYMERS FOR BIOLOGICAL RESEARCH. (DESCRIPTION AND APPLICATIONS.) 32 PP. UPPSALA, SWEDEN, AND PISCATAWAY, NEW JERSEY, USA.

(1219) RICE, J. M., AND R. M. MADISON. 1972. SUBCUTANEOUS INJECTIONS OF VACCINE ADJUVANT DEAE-DEXTRAN INDUCE LOCAL SARCOMAS IN MICE. NATURE (LONDON) NEW BIOL. 236:28.

(1220) ------, J. K. DAVIDSON, R. M. MADISON, AND OTHERS. 1973. ONCOGENIC WATER-SOLUBLE POLYCATIONS. I. INDUCTION OF SARCOMAS IN MICE BY DIETHYLAMINOETHYL-DEXTRAN. J. NAT. CANCER INST. 50(2):387-401. ALSO IN CHEM. ABSTR. 1973. 78:120032U.

(1221) RIGBY, P. G. 1969. PROLONGATION OF SURVIVAL OF TUMOUR-BEARING ANIMALS BY TRANSFER OF "IMMUNE" RNA WITH DEAE-DEXTRAN. NATURE (LONDON) 221:968-969.

(1222) RYSER, H. J. P. 1967. A MEMBRANE EFFECT OF BASIC POLYMERS DEPENDENT ON MOLECULAR SIZE. NATURE (LONDON) 215:934-936.

(1223) TAURASO, N. M. 1967. EFFECT OF DIETHYLAMINOETHYL DEXTRAN ON THE GROWTH OF MYCOPLASMA IN AGAR. J. BACTERIOL. 93:1559-1564.

(1224) TILLES, J. G. 1970. DIETHYLAMINOETHYL-DEXTRAN ENHANCEMENT OF INTERFERON INDUCTION BY A COMPLEXED POLYRIBONUCLEOTIDE. PROC. SOC. EXPT. BIOL. MED. 133:1334-1341.

(1225) VAHERI, A., W. D. SEDWICK, AND S. A. PLOTKIN. 1967. GROWTH OF RUBELLA VIRUS IN BHK21 CELLS. II. ENHANCING EFFECT OF DEAE-DEXTRAN, SEMICARBAZIDE AND LOW DOSES OF METABOLIC INHIBITORS. PROC. SOC. EXPTL. BIOL. MED. 125:1092-1098.

(1226) VAN WEZEL, A. L. 1967. GROWTH OF CELL-STRAINS AND PRIMARY CELLS ON MICRO-CARRIERS (DEAE-SEPHADEX) IN HOMOGENEOUS CULTURE. NATURE (LONDON) 216:64-65.

(1227) WARDEN, D., AND H. V. THORNE. 1968. THE INFECTIVITY OF POLYOMA VIRUS DNA FOR MOUSE EMBRYO CELLS IN THE PRESENCE OF DIETHYLAMINOETHYL-DEXTRAN. J. GEN. VIROL. 3:371-377.

(1228) ------ AND H. V. THORNE. 1969. INFLUENCE OF DIETHYLAMINOETHYL-DEXTRAN ON UPTAKE AND DEGRADATION OF POLYOMA VIRUS DEOXYRIBONUCLEIC ACID BY MOUSE EMBRYO CELLS. J. VIROL. 4:380-387. ALSO IN CHEM. ABSTR. 1969. 71:110744D.

(1229) WOOD, J. W., AND P. T. MORA. 1963. PREPARATION AND BIOLOGICAL APPLICATION OF HIGHLY SUBSTITUTED CATIONIC DERIVATIVES OF POLYSACCHARIDES. J. POLYM. SCI. PART A, 1:3511-3517.

SEE ALSO: 1106 1426 1470

D. Iron-Dextran Complex

Preparation, characterization, structure, and metabolism.

(1230) BOYAZHIEVA, A., M. IOTOV, AND P. DILOV. 1975. [PRODUCTION OF A COMPLEX PREPARATION OF FERRODEXTRAN, GAMMA GLOBULIN, TRACE ELEMENTS, AND VITAMINS] (IN BULGARIAN). VET. MED. NAUKI 12(8):45-51. ALSO IN CHEM. ABSTR. 1976. 84:79667P.

(1231) BREMNER, I., J. S. G. COX, AND G. F. MOSS. 1969. STRUCTURAL STUDIES ON IRON-DEXTRAN: CHARACTERISATION OF AN ALKALI-DEGRADED DEXTRAN SUITABLE FOR USE IN THE PRODUCTION OF PARENTERAL IRON-DEXTRAN COMPLEXES. CARBOHYDR. RES. 11:77-84.

(1232) COX, J. S. G., R. E. KING, AND G. F. REYNOLDS. 1965. VALENCY INVESTIGATIONS OF IRON DEXTRAN ('IMFERON'). NATURE (LONDON) 207:1202-1203.

(1233) EVANS, L. A. J., AND N. W. RAMSEY. 1957. ABSORPTION STUDIES ON RADIOACTIVE IRON-DEXTRAN IN PREGNANCY. LANCET (11):1192-1196.

(1234) GRIMES, A. J., AND M. S. R. HUTT. 1957. METABOLISM OF IRON-59-DEXTRAN COMPLEX IN HUMAN SUBJECTS. BRIT. MED. J. 2(5053):1074-1077. ALSO IN CHEM. ABSTR. 1958. 52:9407I.

(1235) MARSHALL, P. R., AND D. RUTHERFORD. 1971. PHYSICAL INVESTIGATIONS ON COLLOIDAL IRON-DEXTRAN COMPLEXES. (INCLUDES SIX ELECTRON PHOTOMICROGRAPHS.) J. COLLOID INTERFACE SCI. 37:390-402.

(1236) MUELLER, A. 1967. [MACROMOLECULAR FERRIC HYDROXIDE COMPLEXES] (IN GERMAN). ARZNEIM. FORSCH. 17:921-931. ALSO IN CHEM. ABSTR. 1968. 68:107865S.

(1237) RAGEN, P. A., L. WALKER, G. D. SPARLING, AND R. P. PILLOW. 1961. THE GASTROINTESTINAL ABSORPTION OF ORAL IRON-DEXTRAN AND FERROUS SULFATE. AM. J. MED. SCI. 242:454-456.

(1238) RICKETTS, C. R., J. S. G. COX, C. FITZMAURICE, AND G. F. MOSS. 1965. THE IRON DEXTRAN COMPLEX. NATURE (LONDON) 237-239.

(1239) WOLFROM, M. L., D. HANESSIAN, AND N. E. FRANKS. 1964. OPTICAL ROTATORY DISPERSIONS OF SELECTED CARBOHYDRATE DERIVATIVES [ABSTRACT 38]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 147:17C.

SEE ALSO: 1251 PATENT SECTION XXXIV C

E. Iron-Dextran Complex

Therapeutic and physiological properties (selected references).

(1240) ANONYMOUS. 1960. CARCINOGENIC RISKS OF IRON DEXTRAN. BRIT. MED. J. 1:788-789.

(1241) ------. 1961. WITHDRAWAL OF IRON-DEXTRAN COMPLEX (IMFERON). J. AM. MED. ASSOC. 175:388.

(1242) ------. 1961. IRON DEFICIENCY IN PREMATURELY BORN INFANTS. NUTR. REV. 19:195-198.

(1243) ------. 1970. IRON DEXTRAN INJECTION. IN THE PHARMACOPEIA OF THE UNITED STATES OF AMERICA (THE UNITED STATES PHARMACOPEIA), 18TH REVISION, PP. 346-347. MACK PRINTING CO., EASTON, PA.

(1244) ------. 1975. IMFERON (REGISTERED TRADEMARK) IRON DEXTRAN INJECTION. IN CHARLES E. BAKER, JR., PUBLISHER, PHYSICIAN'S DESK REFERENCE, PP. 846-847. MEDICAL ECONOMICS CO., ORADELL, NEW JERSEY.

(1245) BALLANTYNE, B., AND P. J. GUILLO. 1973. EFFECTS OF IRON-DEXTRAN COMPLEX ON BETA-GLUCURONIDASE ACTIVITY IN LYMPH NODES. MICROBIOS 7:181-186.

(1246) BOUISSOU, H., M. C. VOISIN, R. DURROUX, AND H. MAGNA. 1968. [PROTECTION FROM EXPERIMENTAL INDIUM SULFATE-INDUCED NEPHROSIS. EFFECT OF FERRIC DEXTRAN] (IN FRENCH). J. UROL. NEPHROL. 74(9):710-717. ALSO IN CHEM. ABSTR. 1970. 72:119598C.

(1247) BUGNOWSKI, H., E. WOHLFARTH, AND V. HESSE. 1974. [PARENTERAL PROPYLAXIS AGAINST ANEMIA IN SUCKING PIGLETS. USING URSOFERRAN-100 (IRON-CARBOXYMETHYL-DEXTRAN)] (IN GERMAN). MONATSH. VETERINAERMED. 29(20):788-790. ALSO IN CHEM. ABSTR. 1975. 82:106425A.

(1248) DILOV, P., A. BUKURESHTLIEV, AND R. TSEKOVA. 1975. [INFLUENCE OF OXIDATION OF DEXTRAN ON TOXICITY AND RESORPTION OF IRON-DEXTRAN COMPLEXES] (IN BULGARIAN). FARMATSIYA (SOFIA) 25(3):14-19. ALSO IN CHEM. ABSTR. 1976. 69430S.

(1249) FOOD AND DRUG ADMINISTRATION. 1971. IRON DEXTRAN COMPLEX INJECTION. FED. REGIST. 36(133):12974.

(1250) GABBIANI, G., H. SELYE, AND B. TUCHWEBER. 1962. PREVENTION OF INDIUM INTOXICATION BY FERRIC DEXTRAN. BR. J. PHARMACOL. 19:508-512. ALSO IN CHEM. ABSTR. 1963. 58:4957A.

(1251) GARBY, L., AND S. SJOELIN. 1957. SOME OBSERVATIONS ON THE DISTRIBUTION KINETICS OF RADIOACTIVE COLLOIDAL IRON (IMFERON AND FERRIC HYDROXIDE). ACTA MED. SCAND. 157:319-325. ALSO IN CHEM. ABSTR. 1957. 51:14112C.

(1252) GOLBERG, L., W. FEE, AND L. E. MARTIN. 1955. IRON-DEXTRAN COMPLEX IN MICE AND MAN. LANCET 268:818.

(1253) ------, J. P. SMITH, AND L. E. MARTIN. 1957. EFFECTS OF MASSIVE IRON OVERLOAD IN THE RAT. NATURE (LONDON) 179:734-735.

(1254) ------, L. E. MARTIN, AND A. BATCHELOR. 1960. BIOCHEMICAL CHANGES IN THE TISSUES OF ANIMALS INJECTED WITH IRON: ACID PHOSPHATASE AND OTHER ENZYMES. BIOCHEM. J. 77:252-262.

(1255) HADDOW, A., AND E. S. HORNING. 1960. CARCINOGENICITY OF AN IRON-DEXTRAN COMPLEX. J. NAT. CANCER INST. 24:109-147. ALSO IN CHEM. ABSTR. 1960. 54:16611A.

(1256) HIBBS, J. W., H. R. CONRAD, J. H. VANDERSALL, AND C. GALE. 1963. OCCURRENCE OF IRON DEFICIENCY ANEMIA IN DAIRY CALVES AT BIRTH AND ITS ALLEVIATION BY IRON DEXTRAN INJECTION. J. DAIRY SCI. 46(10):1118-1124.

(1257) KUNZ, J., L. SHAHAB, K. HENZE, AND H. DAVID. 1963. [CARCINOGENIC ACTIVITY OF IRON-DEXTRAN (URSOFERRAN)] (IN GERMAN). ACTA BIOL. MED. GER. 10(5-6):602-614. ALSO IN CHEM. ABSTR. 1964. 60:954F.

(1258) LOFTUS, L. R. 1960. UNUSUAL ALLERGIC REACTION TO IRON-DEXTRAN COMPLEX. (INCLUDES EXCELLENT REVIEW OF PREVIOUS PUBLICATIONS.) J. AM. MED. ASSOC. 174:302-303.

(1259) MARTIN, L. E. 1955. PHARMACOLOGY OF IMFERON AND INTRAMUSCULAR IRON. IN CONGR. INTERN. BIOCHIM. RESUMES COMMUNS., 3RD. CONGR. BRUSSELS. 133 PP. ALSO IN CHEM. ABSTR. 1956. 50:14127F.

(1260) ------, C. M. BATES, E. LONDON, AND OTHERS. 1955. THE PHARMACOLOGY OF AN IRON-DEXTRAN INTRAMUSCULAR HAEMATINIC. BR. J. PHARMACOL. 10:375-382. ALSO IN CHEM. ABSTR. 1956. 50:2069D.

(1261) MCINTYRE, E. R. 1958. IRON DEXTRAN TO PIGS. 1958. AGRIC. LEADERS DIG. 39(9):23.

(1262) MUIR, A. R., AND L. GOLBERG. 1961. THE TISSUE RESPONSE TO IRON-DEXTRAN; AN ELECTRON MICROSCOPE STUDY. J. PATHOL. BACTERIOL. 82:471-482. ALSO IN CHEM. ABSTR. 1962. 56:5346G.

(1263) NORDEN, A. 1957. [INVESTIGATION ON INTRAMUSCULARLY ADMINISTERED IRON-DEXTRAN COMPLEX (IMPFERON) LABELLED WITH IRON-59] (IN NORWEGIAN). NORD. MED. 58:1216-1220. ALSO IN CHEM. ABSTR. 1958. 52:11261F.

(1264) PRITCHARD, J. A. 1966. HEMOGLOBIN REGENERATION IN SEVERE IRON-DEFICIENCY ANEMIA: RESPONSE TO ORALLY AND PARENTERALLY ADMINISTERED IRON PREPARATIONS. J. AM. MED. ASSOC. 195:717-720.

(1265) SCHEN, R. J. 1962. THE PROBLEM OF IRON-DEXTRAN. (A REVIEW.) HAROKEACH HAIVRI 9:137-141. ALSO IN CHEM. ABSTR. 1962. 57:9143B.

(1266) SELYE, H., A. SOMOGYI, AND I. MECS. 1968. CALCERGY INHIBITED BY CALCIPHYLACTIC CHALLENGERS. SCIENCE 159:1361-1362.

(1267) STASKIEWICZ, G., Z. ROLINSKI, B. RUBAJ, AND S. PATYRA. 1970. [PHARMACOLOGICAL STUDIES OF IRON AND HYDROGENATED DEXTRAN COMPLEX] (IN POLISH). ANN. UNIV. MARIAE CURIE-SKLODOWSKA SECT. DD, 25:143-154. ALSO IN CHEM. ABSTR. 1971. 75:86839P.

(1268) SWENSON, M. J., D. H. WILL, P. S. ESKRIDGE, AND N. H. BOATH. 1957. A PRELIMINARY REPORT ON THE EFFECTS OF IRON-DEXTRAN, INJECTED INTRAMUSCULARLY, ON THE GROWTH RATE OF NEWBORN PIGS. J. AM. VET. MED. ASSOC. 131:146-147.

(1269) TOLLERZ, G., AND N. LANNEK. 1964. PROTECTION AGAINST IRON TOXICITY IN VITAMIN E-DEFICIENT PIGLETS AND MICE BY VITAMIN E AND SYNTHETIC ANTIOXIDANTS. NATURE (LONDON) 201:846-847.

(1270) WALKER, E. A., AND J. H. TAYLOR. 1961. THE EFFECT OF PARENTERALLY ADMINISTERED IRON UPON THE GROWTH OF PIGLETS REARED ON CONCRETE. ANIM. PROD. 3:225-231. ALSO IN CHEM. ABSTR. 1962. 56:5183I.

(1271) WALLERSTEIN, R. O., AND M. S. HOAG. 1957. TREATMENT WITH IRON-DEXTRAN OF IRON-DEFICIENCY ANEMIA IN CHILDREN. J. AM. MED. ASSOC. 164:962-966.

(1272) ------ AND S. R. METTIER. 1958. IRON IN CLINICAL MEDICINE. (SYMPOSIUM ON IRON IN CLINICAL MEDICINE, UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE, 1957.) UNIVERSITY OF CALIFORNIA PRESS, BERKELY AND LOS ANGELES. 283 PP.

(1273) ZUSCHEK, F., J. GILLINGHAM, AND F. CLARK. 1960. CLINICAL STUDIES OF A PARENTERAL POLYSACCHARIDE-IRON COMPLEX. (IN PIGLETS.) VET. MED. 55(13):63-66. ALSO IN CHEM. ABSTR. 1961. 55:2920A.

SEE ALSO: 1152 1753

F. Derivatives (Complexes) of Nonferrous Metals

(1274) AASETH, J. 1973. EFFECT OF MERCAPTODEXTRAN ON DISTRIBUTION AND TOXICITY OF MERCURY IN MICE. ACTA PHARMACOL. TOXICOL. 32:430-441. ALSO IN CHEM. ABSTR. 1973. 79:74660T.

(1275) ------ AND T. NORSETH. 1974. EFFECT OF MERCAPTODEXTRAN AND NITROGEN-ACETYLHOMOCYSTEINE ON THE EXCRETION OF MERCURY IN MICE AFTER EXPOSURE TO METHYLMERCURY CHLORIDE. ACTA PHARMACOL. TOXICOL. 35:23-32. ALSO IN CHEM. ABSTR. 1974. 81:164138Z.

(1276) CASALS, J. B. 1972. PHARMACOKINETIC AND TOXICOLOGICAL STUDIES OF ANTIMONY DEXTRAN GLYCOSIDE (RL-712). BR. J. PHARMACOL. 46(2):281-288. ALSO IN CHEM. ABSTR. 1973. 78:106672W.

(1277) ELDJARN, L., AND E. JELLUM. 1963. ORGANOMERCURIAL-POLYSACCHARIDE, A CHROMATOGRAPHIC MATERIAL FOR THE SEPARATION AND ISOLATION OF SH-PROTEINS. ACTA CHEM. SCAND. 17:2610-2621.

(1278) GOLBERG, L., S. B. D. BAKER, AND J. P. SMITH. 1963. THE EFFECTS OF SUBCUTANEOUS ALUMINUM-DEXTRAN IN MICE AND RATS. J. PATHOL. BACTERIOL. 85(2):435-439.

(1279) GRAESBECK, R., AND R. KARLSSON. 1963. CONTINUOUS MICRODETERMINATION OF PROTEINS WITH A SEPHADEX-COPPER-64 DETECTOR COLUMN. ACTA CHEM. SCAND. 17:1-7.

(1280) GRUENWEDEL, D. W., AND J. C. C. FU. 1971. MERCURATED DEXTRAN COLUMN CHROMATOGRAPHY FOR FRACTIONATING MONONUCLEOTIDES. PROC. NAT. ACAD. SCI. U.S. 68:2002-2005.

(1281) JELLUM, E., J. AASETH, AND L. ELDJARN. 1973. MERCAPTODEXTRAN, A METAL-CHELATING AND DISULPHIDE-REDUCING POLYTHIOL OF HIGH MOLECULAR WEIGHT. BIOCHEM. PHARMACOL. 22:1179-1188.

(1282) KUBAT, A. 1963. IMPROVING THE LABELING OF DEXTRAN WITH CR-51 BY USING ASCORBIC ACID. STRAHLENTHERAPIE 120:315-317. ALSO IN CHEM. ABSTR. 1963. 59:7842H.

(1283) MESTER, L. 1958. [HEAVY-METAL COMPLEXES OF POLYSACCHARIDE FORMAZANES] (IN GERMAN, ENGLISH SYNOPSIS). J. POLYM. SCI. 30:239-245.

(1284) ROWE, C. E. 1956. COMPLEXES OF DEXTRAN WITH METAL IONS. PH.D. THESIS. UNIVERSITY OF BIRMINGHAM, ENGLAND.

(1285) SEN GUPTA, P. C., A. CHATTERJI, AND A. M. MUKHERJEE. 1960. ANTIMONY DEXTRAN COMPLEX IN THE TREATMENT OF KALA-AZAR: PRELIMINARY OBSERVATIONS. BULL. CALCUTTA SCH. TROP. MED. 7(1):6. ALSO IN BIOL. ABSTR. 1961. 30:2303.

(1286) ------, A. CHATTERJI, AND A. M. MUKHERJEE. 1961. ANTIMONY DEXTRAN COMPLEX IN THE TREATMENT OF LEISHMANIASIS. J. INDIAN MED. ASSOC. 37:585-590.

(1287) SNEZHKO, V. A., A. D. VIRNIK, AND E. F. SHARKOVA. 1971. [CATALYTIC ACTIVITY OF A POLYMER COMPLEX FORMED BY A DEXTRAN DERIVATIVE WITH COPPER IONS] (IN RUSSIAN). IZV. VYSSH. UCHEB. ZAVED, KHIM. KHIM. TECHNOL. 14:771-774. (ENGLISH TRANSL. IN INDOC, NEW DEHLI TT 72-51139:1-6.) ALSO IN CHEM. ABSTR. 1971. 75:101652T.

SEE ALSO: 1111 1117 1128 1133 1230 2026
PATENT SECTION XXXIV D

G. Gel-Type Derivatives for Gel-Filtration, and for Adsorption, Thin-Layer, and Ion-Exchange Chromatography

Selected references on the initial fundamental research, reviews, and representative applications.

Complete listings of literature references are published in reference 1217.

(1288) ACKERS, G. K. 1964. MOLECULAR EXCLUSION AND RESTRICTED DIFFUSION PROCESSES IN MOLECULAR-SIEVE CHROMATOGRAPHY. BIOCHEMISTRY 3:723-730.

(1289) ALTGELT, K. H., AND J. C. MOORE. 1967. GEL PERMEATION CHROMATOGRAPHY. IN M. J. R. CANTOW, ED, POLYMER FRACTIONATION, PP. 123-179. ACADEMIC PRESS, NEW YORK AND LONDON.

(1290) ASPINALL, P. T., AND J. N. MILLER. 1973. THIN LAYER GEL CHROMATOGRAPHY OF DEXTRANS. ANAL. BIOL. 53:509-513.

(1291) BREWER, J. 1971. ENZYME PURIFICATION BY GEL FILTRATION. PROCESS BIOCHEM. 6(9):39-42.

(1292) DAVIS, J. C. 1972. MOLECULAR SEIVE SEPARATES PROTEIN FROM CHEESE WHEY. CHEM. ENG. 79(JULY 24):114-115.

(1293) DETERMANN, H. 1969. PRINCIPLES OF GEL CHROMATOGRAPHY. ADV. CHROMATOGR. 8:3-45.

(1294) EMNEUS, N. I. A. 1968. A PROCEDURE FOR GEL FILTRATION OF VISCOUS SOLUTIONS. J. CHROMATOGR. 32:243-257.

(1295) FLODIN, P., B. GELOTTE, AND J. PORATH. 1960. A METHOD FOR CONCENTRATING SOLUTES OF HIGH MOLECULAR WEIGHT. NATURE (LONDON) 188:493-494.

(1296) ------. 1961. METHODOLOGICAL ASPECTS OF GEL FILTRATION WITH SPECIAL REFERENCE TO DESALTING OPERATIONS. J. CHROMATOGR. 5:103-115.

(1297) ------. 1962. DEXTRAN GELS AND THEIR APPLICATIONS IN GEL FILTRATION. MEIJELS BOKINDUSTRI, HALMSTAD, PHARMACIA, UPPSALA. 85 PP.

(1298) FORSUM, E., L. HAMBRAEUS, AND I. H. SIDDIQI. 1974. LARGE-SCALE FRACTIONATION OF WHEY PROTEIN CONCENTRATES. J. DAIRY SCI. 57:659-664.

(1299) GELOTTE, B. 1964. FRACTIONATION OF PROTEINS, PEPTIDES AND AMINO ACIDS BY GEL FILTRATION. IN A. T. JAMES AND L. J. MORRIS, NEW BIOCHEMICAL SEPARATIONS, PP. 93-109. D. VAN NOSTRAND CO. LTD., LONDON; TORONTO; NEW YORK; AND PRINCETON, NEW JERSEY.

(1300) LAURENT, T. C., AND J. KILLANDER. 1964. A THEORY OF GEL FILTRATION AND ITS EXPERIMENTAL VERIFICATION. J. CHROMATOGR. 14:317-330.

(1301) MARSDEN, N. V. B. 1971. TRITIUM EXCHANGE IN SEPHADEX (REGISTERED TRADEMARK) G-10. J. CHROMATOGR. 58:304-306.

(1302) NEAL, M. W., AND J. R. FLORINI. 1973. A RAPID METHOD FOR DESALTING SMALL VOLUMES OF SOLUTION. ANAL. BIOCHEM. 55:328-330.

(1303) PHARMACIA FINE CHEMICALS. 1970. SEPHADEX:GEL FILTRATION IN THEORY AND PRACTICE. UPPSALA, SWEDEN, AND PISCATAWAY, NEW JERSEY.

(1304) ------. 1970. SEPHADEX ION EXCHANGERS. UPPSALA, SWEDEN, AND PISCATAWAY, NEW JERSEY.

(1305) PORATH, J., AND P. FLODIN. 1959. GEL FILTRATION: A METHOD FOR DESALTING AND GROUP SEPARATION. NATURE (LONDON) 183:1657-1659.

(1306) ------. 1959. FRACTIONATION OF POLYPEPTIDES AND PROTEINS ON DEXTRAN GELS. CLIN. CHIM. ACTA 4(6):776-778.

(1307) ------. 1960. DEXTRAN GEL FILTRATION OF PROTEINS, PEPTIDES, AND AMINO ACIDS. BIOCHIM. BIOPHYS. ACTA 39:193-207.

(1308) ------. 1962. CROSS-LINKED DEXTRANS AS MOLECULAR SEIVES. ADV. PROTEIN CHEM. 17:209-226.

(1309) ------. 1968. MOLECULAR SEIVING AND ADSORPTION. (A REVIEW.) NATURE (LONDON) 218:834-836.

(1310) RADOLA, B. J. 1968. THIN-LAYER GEL FILTRATION OF PROTEINS I. METHOD. J. CHROMATOGR. 38:61-77.

(1311) ------. 1968. THIN-LAYER GEL FILTRATION OF PROTEINS II. APPLICATIONS. J. CHROMATOGR. 38:78-90.

(1312) SAMUELSSON, E-G., P. TIBBLING, AND S. HOLM. 1967. GEL FILTRATION--ROAD TO NEW PRODUCTS. PROTEIN-ENRICHED MILK: ONE APPLICATION. FOOD TECHNOL. 21:121-124.

(1313) ZEITLER, H-J., AND E. STADLER. 1972. DETERMINATION OF PARAMETERS IN DEXTRAN GEL FILTRATION. J. CHROMATOGR. 74:59-71.

SEE ALSO: 348 435 442 452 THROUGH 457 464 490 1084 1110 1133 1147 1150 1161 1279 1280 1515 1517 1536 1616 1644 1645 2429 2431 PATENT SECTION XXXV B

XV. Dextran sulfates

A. Preparation, Properties, and Location of Substituents

(1314) INGELMAN, B. 1945. [DEXTRAN SULFURIC ACID ESTER] (IN SWEDISH, ENGLISH SUMMARY). SOCKER HANDL. 1(7):190-192.

(1315) MIYAJI, H., AND A. MISAKI. 1973. DISTRIBUTION OF SULFATE GROUPS IN THE PARTIALLY SULFATED DEXTRANS. J. BIOCHEM. 74:1131-1139.

(1316) NAGASAWA, K., Y. TOHIRA, Y. INOUE, AND N. TANOURA. 1971. REACTION BETWEEN CARBOHYDRATES AND SULFURIC ACID. PART 1. DEPOLYMERIZATION AND SULFATION OF POLYSACCHARIDES BY SULFURIC ACID. CARBOHYDR. RES. 18:95-102.

(1317) ------, H. HARADA, S. HAYASHI, AND T. MISAWA. 1972. SULFATION OF DEXTRAN WITH PIPERIDINE-N-SULFONIC ACID. CARBOHYDR. RES. 21:420-426.

(1318) OVEREND, W. G., AND C. R. RICKETTS. 1957. HYDROLYSIS OF DEXTRAN SULPHATE. CHEM. IND. (LONDON) (20):632.

(1319) REES, D. A. 1963. A NOTE ON THE CHARACTERIZATION OF CARBOHYDRATE SULFATES BY ACID HYDROLYSIS. BIOCHEM. J. 88:343-345.

(1320) RICKETTS, C. R. 1952. DEXTRAN SULFATE: A SYNTHETIC ANALOGUE OF HEPARIN. BIOCHEM. J. 51:129-133.

(1321) ------, K. W. WALTON, AND S. M. SADDINGTON. 1954. PREPARATION OF DEXTRAN [S-35] SULFATE AND TRACER EXPERIMENTS IN THE RABBIT. BIOCHEM. J. 58:532-536.

(1322) ------. 1956. THE DISTRIBUTION OF ESTER GROUPS IN DEXTRAN SULFATE AND THEIR STABILITY TOWARDS HYDROLYTIC REAGENTS. J. CHEM. SOC. (LONDON) 3752-3756.

(1323) TAKAHASHI, N., AND F. EGAMI. 1961. HYDROLYSIS OF POLYSACCHARIDE SULFATE ESTERS BY A SULPHATASE PREPARATION FORM CHARONIA LAMPAS. BIOCHEM. J. 80:384-386.

(1324) WEIGEL, H., AND K. W. WALTON. 1959. SYNTHESIS OF DEXTRAN SULPHATE LABELLED WITH CARBON-14 AND TRACER EXPERIMENTS IN THE RAT. NATURE (LONDON) 183:981-982.

(1325) WHISTLER, R. L., AND W. W. SPENCER. 1961. PREPARATION AND PROPERTIES OF SEVERAL POLYSACCHARIDE SULFATES. ARCH. BIOCHEM. BIOPHYS. 95:36-41.

(1326) ZAKRZEWSKI, K., AND M. WOJNAROWSKA. 1954. [SULFONIC ESTERS OF HYDROLYZED DEXTRAN (PRELIMINARY REPORT)] (IN POLISH). ACTA BIOCHIM. POL. 1:285-291. ALSO IN CHEM. ABSTR. 1955. 49:10444D.

SEE ALSO: PATENT SECTION XXXIV F

B. Properties (Chemical and Physicochemical) and Reactions

(1327) ALLGEN, L. G. 1954. DIELECTRIC INCREMENTS AND DISPERSIONS IN AQUEOUS SOLUTIONS OF A DEXTRAN ESTER SULPHATE. ACTA CHEM. SCAND. 8:60-63.

(1328) CALCINARI, R. 1970. [ZETA POTENTIAL AND ITS IMPORTANCE IN PHARMACEUTICAL TECHNOLOGY] (IN ITALIAN). FARMACO ED. PRAT. 25(1):24-38. ALSO IN CHEM. ABSTR. 1970. 72:93316G.

(1329) HAUG, A., AND O. SMIDSROED. 1970. SELECTIVITY OF SOME ANIONIC POLYMERS FOR DIVALENT METAL IONS. ACTA CHEM. SCAND. 24:843-854.

(1330) KIMIZUKA, H., A. YAMAUCHI, AND T. MORI. 1967. SELECTIVE INTERACTION OF DEXTRAN SULFATE WITH INORGANIC CATIONS. BULL. CHEM. SOC. JPN. 40(5):1281-1282. ALSO IN CHEM. ABSTR. 1967. 67:60523R.

(1331) MARSDEN, J. C., AND P. W. KENT. 1962. MICROFRACTIONATION ON PAPER OF ACIDIC POLYSACCHARIDES AND RELATED SUBSTANCES. NATURE (LONDON) 573-574.

(1332) MOORE, J. S., G. O. PHILLIPS, J. V. DAVIES, AND K. S. DODGSON. 1970. REACTIONS OF CONNECTIVE TISSUE AND RELATED POLYANIONS WITH HYDRATED ELECTRONS AND HYDROXYL RADICALS. CARBOHYDR. RES. 12:253-260.

(1333) MUELLER, H. E. 1967. [MOLECULAR MODEL OF AN ION PUMP] (IN GERMAN). PFLUEGERS ARCH. GESAMTE PHYSIOL. 295(1):30-41. ALSO IN CHEM. ABSTR. 1967. 67:29220R.

(1334) OKHUMA, S., K. FUKAWA, AND T. FURUHATA. 1970. PAPER ELECTROPHORESIS OF DEXTRAN SULFATES. PROC. JPN. ACAD. 46(7):713-716. ALSO IN CHEM. ABSTR. 1971. 74:83851E.

(1335) ------, K. FUKAWA, AND T. FURUHATA. 1970. INTERACTION OF DEXTRAN SULFATES WITH POSITIVELY CHARGED SUBSTANCES. PROC. JPN. ACAD. 46(7):798-802. ALSO IN CHEM. ABSTR. 1971. 74:83216B.

(1336) PASIKA, W. M., AND L. H. CRAGG. 1962. THE VISCOSITY BEHAVIOR OF LINEAR AND BRANCED DEXTRAN SULFATES. J. POLYM. SCI. 57:301-310.

(1337) SATAKE, I., M. FUKUDA, T. OHTA, AND OTHERS. 1972. INTERACTIONS OF COUNTERIONS WITH DEXTRAN SULFATE IN AQUEOUS SOLUTIONS. J. POLYM. SCI. 10:2343-2354.

(1338) SCOTT, J. E. 1955. THE REACTION OF LONG-CHAIN QUATERNARY AMMONIUM SALTS WITH ACIDIC POLYSACCHARIDES. CHEM. IND. (LONDON) (7):168-169.

(1339) ------. 1955. THE SOLUBILITY OF CETYLPYRIDINIUM COMPLEXES OF BIOLOGICAL POLYANIONS IN SOLUTIONS OF SALTS. BIOCHIM. BIOPHYS. ACTA 18:428-429.

(1340) ------. 1962. PRECIPITATION OF POLYANIONS BY LONG-CHAIN ALIPHATIC AMMONIUM SALTS. VI. THE AFFINITY OF SUBSTITUTED AMMONIUM CATIONS FOR THE ANIONIC GROUPS OF SOME BIOLOGICAL POLYMERS. BIOCHEM. J. 84:270-275.

(1341) TSANG, Y., AND T. E. THOMPSON. 1965. THE USE OF COMBINED SCHLIEREN AND ADSORPTION OPTICS IN AN ELECTROPHORETIC STUDY OF THE REVERSIBLY INTERACTING SYSTEM DEXTRAN SULFATE-CARBOXYHEMOGLOBIN. J. PHYS. CHEM. 69:4242-4249.

(1342) USOV, A. I., AND K. S. ADAMYANTS. 1975. [SOLVOLYTIC DESULFATION OF DEXTRAN SULFATE] (IN RUSSIAN). BIOORG. KHIM. 1(5):659-664. ALSO IN CHEM. ABSTR. 1976. 84:59894G.

(1343) WELLS, J. D. 1973. SALT ACTIVITY AND OSMOTIC PRESSURE IN CONNECTIVE TISSUE. I. A STUDY OF SOLUTIONS OF DEXTRAN SULFATE AS A MODEL SYSTEM. PROC. ROY. SOC. LONDON SER. B. 183:399-419. ALSO IN CHEM. ABSTR. 1973. 79:101837Q.

(1344) YAMAUCHI, A., AND H. KIMIZUKA. 1967. SELECTIVE ION-BINDING TO DEXTRAN SULFATE. MEM. FAC. SCI. KYUSHU UNIV. SER. C. 6(1):1-4. ALSO IN CHEM. ABSTR. 1967. 67:87777P.

SEE ALSO: 570 571 828 857 879 997 1167 1168 1188 1195 THROUGH 1197 1558

C. Action with Lipoproteins, Lipases, and Cholesterol (Partial Coverage)

(1345) BERNFELD, P., J. S. NISSELBAUM, B. J. BERKELEY, AND R. W. HANSON. 1960. THE INFLUENCE OF CHEMICAL AND PHYSICOCHEMICAL NATURE OF MACROMOLECULAR POLYANIONS ON THEIR INTERACTION WITH HUMAN SERUM BETA-LIPOPROTEINS. J. BIOL. CHEM. 235:2852-2859.

(1346) ------ AND T. F. KELLEY. 1963. INHIBITORY AND ACTIVATING EFFECTS OF POLYANIONS ON LIPOPROTEIN LIPASE. J. BIOL. CHEM. 238:1236-1241.

(1347) BURSTEIN, M., AND J. SAMAILLE. 1958. [NEW METHOD FOR THE DETERMINATION OF CHOLESTEROL BOUND TO ALPHA- AND BETA-LIPOPROTEINS IN SERUM] (IN FRENCH). CLIN. CHIM. ACTA 3:320-322. ALSO IN CHEM. ABSTR. 1959. 53:9331I.

(1348) CANAL, J., J. DELATTRE, A. LEGRAND, AND M. L. GIRARD. 1974. [AUTOMATIC DETERMINATION OF SERUM LIPIDS OF THE BETA AND PRE-BETA GROUP OF LIPOPROTEINS] (IN FRENCH). PATHOL. BIOL. 22(2):173-178. ALSO IN CHEM. ABSTR. 1974. 81:971Q.

(1349) CASTAIGNE, A., AND A. AMSELEM. 1959. [DISTRIBUTION OF THE UNESTERIFIED AND ESTERIFIED FRACTIONS OF CHOLESTEROL AMONG THE ALPHA- AND BETA-LIPOPROTEINS] (IN FRENCH). ANN. BIOL. CLIN. (PARIS) 17:336-347. ALSO IN CHEM. ABSTR. 1960. 54:3674D.

(1350) COGAN, U., AND T. NISHIDA. 1969. EFFECT OF VARIOUS SHORT AND LONG CHAIN FATTY ACIDS ON THE DEXTRAN SULFATE-LOW DENSITY LIPOPROTEIN INTERACTION. BIOCHIM. BIOPHYS. ACTA 187:444-446.

(1351) CORNWELL, D. G., AND F. A. KRUGER. 1961. MOLECULAR COMPLEXES IN THE ISOLATION AND CHARACTERIZATION OF PLASMA LIPOPROTEINS. (A REVIEW.) J. LIPID RES. 2:110-134.

(1352) DAY, C. E., R. L. VOET, AND R. S. LEVY. 1970. ELIMINATION OF LOW-DENSITY LIPOPROTEIN-POLYANION INTERACTION BY AMINO MODIFICATION. FEBS LETT. 7:41-43.

(1353) HILL, P., AND D. DVORNIK. 1969. AGENTS AFFECTING LIPID METABOLISM. XXXVII. SEPARATION OF RAT SERUM LIPOPROTEINS WITH DEXTRAN SULFATE. CAN. J. BIOCHEM. 47:1043-1047.

(1354) JANADO, M., AND T. NISHIDA. 1967. SEDIMENTATION PROPERTIES OF DEXTRAN SULFATE-LOW DENSITY LIPOPROTEIN COMPLEXES. AGRIC. BIOL. CHEM. 31:802-808.

(1355) ------ AND T. NISHIDA. 1972. SEDIMENTATION ANALYSIS OF THE INTERACTING MIXTURE OF DEXTRAN SULFATE AND LOW DENSITY LIPOPROTEIN. AGRIC. BIOL. CHEM. 36:301-304.

(1356) KELER-BACOKA, M. 1963. [A CHARACTERISTIC PROPERTY OF THE PLASMACYTOMA LIPIDS IN RELATION TO SERUM LIPID PRECIPITATION WITH DEXTRAN SULFATE SOLUTION] (IN GERMAN). CLIN. CHIM. ACTA 8:215-219. ALSO IN CHEM. ABSTR. 1963. 59:13199H.

(1357) ------. 1963. [A SPECIFIC PROPERTY OF SERUM PLASMACYTOMA LIPIDS AFTER PRECIPITATION WITH DEXTRAN SULFATE SOLUTION] (IN GERMAN). PROTIDES BIOL. FLUIDS PROC. COLLOQ. 10:151-153. ALSO IN CHEM. ABSTR. 1963. 59:9181E.

(1358) KELLEN, J., AND F. LINK. 1962. [COMPARISON OF THE TURBIDIMETRIC DETERMINATION OF LIPOPROTEINS WITH HEPARIN AND DEXTRAN SULFATE] (IN GERMAN). Z. GESAMTE INN. MED. IHRE GRENZGEB. 17:1125-1126. ALSO IN CHEM. ABSTR. 1963. 59:15732E.

(1359) KORN, E. D. 1962. THE KINETICS OF THE INHIBITION OF LIPOPROTEIN LIPASE BY POLYANIONS AND POLYCATIONS. J. BIOL. CHEM. 237:3423-3429.

(1360) KRITCHEVSKY, D., S. A. TEPPER, P. ALAUPOVIC, AND R. H. FURMAN. 1963. CHOLESTEROL CONTENT OF HUMAN SERUM LIPOPROTEINS OBTAINED BY DEXTRAN SULFATE PRECIPITATION AND BY PREPARATIVE ULTRACENTRIFUGATION. PROC. SOC. EXP. BIOL. MED. 112:259-262.

(1361) NISHIDA, T., AND U. COGAN. 1970. NATURE OF THE INTERACTION OF DEXTRAN SULFATE WITH LOW DENSITY LIPOPROTEIN OF PLASMA. J. BIOL. CHEM. 245:4689-4697.

(1362) ONCLEY, J. L., K. W. WALTON, AND D. G. CORNWELL. 1957. A RAPID METHOD FOR THE BULK ISOLATION OF BETA-LIPOPROTEIN FROM HUMAN PLASMA. J. AM. CHEM. SOC. 79:4666-4671.

(1363) ROBINSON, D. S., P. M. HARRIS, AND C. R. RICKETTS. 1959. THE PRODUCTION OF LIPOLYTIC ACTIVITY IN RAT PLASMA AFTER THE INTRAVENOUS INJECTION OF DEXTRAN SULFATE. BIOCHEM. J. 71:286-292.

(1364) SAKAGAMI, T., AND D. B. ZILVERSMIT. 1961. SEPARATION OF DOG SERUM LIPOPROTEINS BY ULTRACENTRIFUGATION, DEXTRAN SULFATE PRECIPITATION, AND PAPER ELECTROPHORESIS. J. LIPID RES. 2:271-277.

(1365) ------ AND D. B. ZILVERSMIT. 1962. DEXTRAN SULFATE PRECIPITATION AND ULTRACENTRIFUGATION OF LIPOPROTEINS AND HYPERCHOLESTEROLEMIC DOG SERUM. J. LIPID RES. 3:111-116.

(1366) SEIDEL, D., H. WIELAND, AND C. RUPPERT. 1973. IMPROVED TECHNIQUES FOR ASSESSMENT OF PLASMA LIPOPROTEIN PATTERNS. I. PRECIPITATION IN GELS AFTER ELECTROPHORESIS WITH POLYANIONIC COMPOUNDS. CLIN. CHEM. 19:737-739. ALSO IN BIOL. ABSTR. 1973. 56:47103.

(1367) STEWART, G. T. 1958. ACTION OF SULFATED POLYSACCHARIDES UPON SERUM LIPIDES UNDER CLINICAL AND EXPERIMENTAL CONDITIONS. BR. J. EXP. PATHOL. 39:109-118. ALSO IN CHEM. ABSTR. 1958. 52:15729H.

(1368) WALTON, K. W., AND P. J. SCOTT. 1964. ESTIMATION OF THE LOW-DENSITY (BETA) LIPOPROTEINS OF SERUM IN HEALTH AND DISEASE USING LARGE MOLECULAR WEIGHT DEXTRAN SULPHATE. J. CLIN. PATHOL. 17:627-643.

(1369) YASUOKA, S., S. FUJII, T. YAMAGUCHI, AND OTHERS. 1973. ACTIVITIES OF SULFATED POLYSACCHARIDES IN THE LIBERATION OF LIPOPROTEIN LIPASE INTO THE BLOOD AND INHIBITION OF ITS ACTIVITY. J. BIOCHEM. (TOKYO) 74(3):425-434. ALSO IN CHEM. ABSTR. 1974. 80:10831H.

D. Anticoagulant Action

Therapeutic action; influence of molecular weight, structure, and degree of substitution. Includes carboxymethyl dextran sulfate.

(1370) GRASSET, E., AND D. E. SCHWARTZ. 1955. IN VIVO AND IN VITRO COMPARATIVE ASSAYS OF THE ANTICOAGULANT ACTIVITY OF DEXTRAN SULFATE AND HEPARIN. BR. J. PHARMACOL. 10:317-320. ALSO IN CHEM. ABSTR. 50:2067E.

(1371) GROENWALL, A., B. INGELMAN, AND H. MOSIMANN. 1945. A SULFURIC ACID ESTER OF DEXTRAN WITH A POTENCY COMPARABLE TO THAT OF HEPARIN. UPSALA LAEKAREFOEREN. FOERH. 50:397-404. ALSO IN CHIM. IND. 1946. 55(3):206 AND CHEM. ABSTR. 1947. 41:5213F.

(1372) HALL, M., AND C. R. RICKETTS. 1952. THE USE OF DEXTRAN SULFATE AS A BLOOD ANTICOAGULANT IN BIOLOGICAL RESEARCH. J. CLIN. PATHOL. (LONDON) 5:366.

(1373) LONDON, E., R. S. THEOBALD, AND G. D. TWIGG. 1955. SYNTHETIC POLYGLUCOSE AND A HEPARINOID DERIVATIVE. CHEM. IND. (LONDON) (34):1060-1061.

(1374) MUSSETT, M. V., AND W. L. PERRY. 1956. AN INTERNATIONAL COLLABORATIVE STUDY OF DEXTRAN SULFATE. BULL. W.H.O. 14:647-656.

(1375) NAGASAWA, K., A. OGAMO, AND S. HAYASHI. 1972. HEPARINOID ACTIVITIES OF DEPOLYMERIZED CHONDROITIN POLYSULFATES. (COMPARISON WITH DEXTRAN SULFATE.) ARCH. BIOCHEM. BIOPHYS. 150:451-458.

(1376) PAYNE, H. G., AND P. J. BAKER, JR. 1953. SULFATED DEXTRAN: BLOOD ANTICOAGULANT ACTIVITY AND TOXICITY STUDIES IN ANIMALS. AM. J. MED. TECHNOL. 19(5): 219-227. ALSO ABSTRACTED IN FED. PROC. 1952. 11(1). ALSO IN CHEM. ABSTR. 1954. 48:2261.

(1377) RICKETTS, C. R., AND K. W. WALTON. 1951. BLOOD ANTICOAGULANTS WITH SPECIAL REFERENCE TO DEXTRAN SULFATE. CHEM. IND. (LONDON) (48):1062.

(1378) ------ AND K. W. WALTON. 1952. BLOOD ANTICOAGULANTS, WITH SPECIAL REFERENCE TO DEXTRAN SULPHATE. CHEM. IND. (LONDON) (36):869-871.

(1379) ------. SYNTHETIC ANTICOAGULANTS. 1952. CHEM. IND. (LONDON) (40):982.

(1380) ------ AND K. W. WALTON. 1953. DEXTRAN SULFATE: THE RELATION OF MOLECULAR FEATURES TO BIOLOGICAL PROPERTIES. BR. J. PHARMACOL. CHEMOTHER. 8:476-477.

(1381) ------, K. W. WALTON, D. B. VAN LEUVEN, AND OTHERS. 1953. THERAPEUTIC TRIAL OF THE SYNTHETIC HEPARIN ANALOGUE DEXTRAN SULFATE. LANCET 265:1004-1010.

(1382) ------. 1954. THE BLOOD ANTICOAGULANT EFFECT OF SHORT CHAIN-LENGTH DEXTRAN SULFATES. BR. J. PHARMACOL. CHEMOTHER. 9:224-228.

(1383) THOMAS, L., J. BRUNSON, AND R. T. SMITH. 1955. STUDIES ON THE GENERALIZED SHWARTZMAN REACTION. VI. PRODUCTION OF THE REACTION BY THE SYNERGISTIC ACTION OF ENDOTOXIN WITH THREE SYNTHETIC ACIDIC POLYMERS (SODIUM POLYANETHOL SULFONATE, DEXTRAN SULFATE, AND SODIUM POLYVINYL ALCOHOL SULFONATE). J. EXP. MED. 102(3):249-261.

(1384) ------, R. T. SMITH, AND R. VON KORFF. 1955. STUDIES ON THE GENERALIZED SHWARTZMAN REACTION VII. THE ROLE OF FIBRINOGEN IN THE DEPOSITION OF FIBRINOID AFTER COMBINED INJECTIONS OF ENDOTOXIN AND SYNTHETIC ACIDIC POLYMER. J. EXP. MED. 102(3):263-278.

(1385) WALTON, K. W. 1951. EXPERIMENTS WITH DEXTRAN SULPHATE AS AN ANTICOAGULANT. PROC. R. SOC. MED. 44:563-564.

(1386) ------ AND C. R. RICKETTS. 1954. ANAPHYLACTOID RESPONSE IN GUINEA PIGS TO THE PARENTERAL ADMINISTRATION OF SULFATE ESTERS OF HIGH MOLECULAR WEIGHT DEXTRAN. NATURE (LONDON) 173:31.

SEE ALSO: 1121 1122 1321 1392 1393

E. Effects on Various Biochemical Substances (Partial Coverage)

Enzymes, proteins, antibodies, nucleic acids, toxins, ribosomes, and blood cells.

(1387) ANDERSON, W., A. J. BAILLIE, J. E. HARTHILL. 1968. PEPTIC INHIBITION BY MACROANIONS. J. PHARM. PHARMACOL. 20:715-722.

(1388) BERNFELD, P., B. J. BERKELEY, AND R. E. BIEBER. 1965. REVERSIBLE DISSOCIATION OF ENZYMES AT HIGH DILUTIONS AND THEIR INHIBITION BY POLYANIONS. ARCH. BIOCHEM. BIOPHYS. 111:31-38.

(1389) CHIANCONE, E., M. R. BRUZZESI, AND E. ANTONINI. 1966. STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. X. THE INTERACTION OF DEXTRAN SULFATE WITH LYSOZYME. BIOCHEMISTRY 5:2823-2828.

(1390) DICKMAN, S. R. 1958. INHIBITION OF RIBONUCLEASE BY POLYACIDS. SCIENCE 127:1392-1393.

(1391) FELLIG, J., AND C. E. WILEY. 1959. THE INHIBITION OF PANCREATIC RIBONUCLEASE BY ANIONIC POLYMERS. ARCH. BIOCHEM. BIOPHYS. 85:313-316.

(1392) GRASSET, E., AND D. E. SCHWARTZ. 1954. [INHIBITION OF THE COAGULANTS OF SNAKE VENOMS BY DEXTRAN SULFATE, A SYNTHETIC ANTICOAGULANT OF BACTERIAL ORGIN] (IN FRENCH). SCHWEIZ. Z. ALLG. PATHOL. 17:514-520. ALSO IN CHEM. ABSTR. 1955. 49:1960H.

(1393) ------ AND D. E. SCHWARTZ. 1955. [INHIBITORY ACTION OF HEPARIN AND DEXTRAN SULFATE, ALONE OR IN COMBINATION WITH ADRENOCORTICOTROPIC HORMONE (ACTH) OR CORTISONE, ON THE COAGULATIVE POWER OF THE VENOM OF CERTAIN VIPERS] (IN FRENCH). BULL. SCHWEIZ. AKAD. MED. WISS. 11:10-22. ALSO IN CHEM. ABSTR. 1955. 49:16216H.

(1394) HAMER, D. 1954. INTERACTION OF ACIDS OF HIGH MOLECULAR WEIGHT WITH ALBUMIN. BIOCHEM. J. 56:610-613.

(1395) HIGGINBOTHAM, R. D. 1962. SULFATED POLYSACCHARIDES AND RESISTANCE TO RUSSELL'S VIPER VENOM. PROC. SOC. EXP. BIOL. MED. 110:135-138.

(1396) ISHIMORI, A. 1971. MECHANISM OF ANTIPEPTIC ACTION OF ANIONIC CARBOHYDRATE AND ITS CLINICAL APPLICATION FOR THE TREATMENT OF PEPTIC ULCER. TOHOKU J. EXP. MED. 103(2):141-157. ALSO IN CHEM. ABSTR. 1971. 74:139061S.

(1397) KENT, P. W., M. HICHENS, AND P. F. V. WARD. 1958. DISPLACEMENT FRACTIONATION OF DEOXYRIBONUCLEOPROTEINS BY HEPARIN AND DEXTRAN SULFATE. BIOCHEM. J. 68:568-572.

(1398) MIYAZAWA, F., O. R. OLIJNYK, C. J. TILLEY, AND T. TAMAOKI. 1967. INTERACTIONS BETWEEN DEXTRAN SULFATE AND ESCHERICHIA COLI RIBOSOMES. BIOCHIM. BIOPHYS. ACTA 145:96-104.

(1399) PETROVIC, S., J. PETROVIC, AND M. E. BAYER. 1967. RELEASE OF MICROSOMAL RIBONUCLEIC ACIDS BY MACROMOLECULAR DEXTRAN SULFATE. BIOCHIM. BIOPHYS. ACTA 145:193-195.

(1400) PHILIPSON, L., AND M. KAUFMAN. 1964. THE EFFICIENCY OF RIBONUCLEASE INHIBITORS TESTED WITH VIRAL RIBONUCLEIC ACID AS SUBSTRATE. BIOCHIM. BIOPHYS. ACTA 80:151-154.

(1401) RICHARDSON, S. H., AND D. J. EVANS, JR. 1968. ISOLATION OF CHOLERA TOXINS BY DEXTRAN SULFATE PRECIPITATION. J. BACTERIOL. 96:1443-1445.

(1402) SASAKI, S., T. TAKEMOTO, AND S. OKA. 1957. TOXICITY OF DEXTRAN SULFATE, A SYNTHETIC HEPARIN-TYPE ANTICOAGULANT. COMPT. REND. SOC. BIOL. 151:1789-1803. ALSO IN CHEM. ABSTR. 1958. 52:16589F.

(1403) ------ AND H. NOGUCHI. 1959. INTERACTION OF FIBRINOGEN WITH DEXTRAN SULFATE. J. GEN. PHYSIOL. 43:1-12.

(1404) TAMAOKI, T. 1966. THE PARTICULATE FRACTION CONTAINING 45 S RNA IN L CELL NUCLEI. J. MOL. BIOL. 15:624-639.

(1405) THOMPSON, T. E., AND W. M. MCKERNAN. 1961. AN ELECTROPHORETIC INVESTIGATION OF INTERACTIONS BETWEEN BOVINE PLASMA ALBUMIN AND CHARGED DEXTRAN DERIVATIVES. BIOCHEM. J. 81:12-23.

(1406) WALTON, K. W. 1952. THE BIOLOGICAL BEHAVIOUR OF A NEW SYNTHETIC ANTICOAGULANT (DEXTRAN SULFATE) POSSESSING HEPARIN-LIKE PROPERTIES. (A REVIEW ON INTERACTION WITH FIBRINOGEN.) BR. J. PHARMACOL. 7:370-391.

(1407) ------. 1953. OBSERVATIONS ON THE EFFECTS OF A SERIES OF DEXTRAN SULFATES OF VARYING MOLECULAR WEIGHT ON THE FORMED ELEMENTS OF THE BLOOD IN VITRO. BR. J. PHARMACOL. CHEMOTHER. 8:340-347. ALSO IN CHEM. ABSTR. 1954. 48:885D.

(1408) ------. 1954. INVESTIGATION OF THE TOXICITY OF A SERIES OF DEXTRAN SULFATES OF VARYING MOLECULAR WEIGHT. BR. J. PHARMACOL. CHEMOTHER. 9:1-14. ALSO IN CHEM. ABSTR. 1954. 48:8426C.

(1409) ------ AND R. B. PENNELL. 1955. PREVENTION OF HEAT-COAGULATION OF HUMAN GAMMA-GLOBULIN AND FIBRINOGEN BY DEXTRAN SULFATE. ARCH. BIOCHEM. BIOPHYS. 56:553-554.

(1410) ------ AND C. R. RICKETTS. 1953. DEXTRAN SULFATE. LANCET 265:1263-1264.

(1411) WOODSIDE, E. E., G. F. TROTT, R. J. DOYLE, AND C. W. FISHEL. 1968. PRECIPITIN-LIKE REACTIONS OF POLYSACCHARIDES WITH GELATIN IN AQUEOUS SOLUTION. CARBOHYDR. RES. 6:449-464.

(1412) ------, R. J. DOYLE, AND G. F. TROTT. 1971. POLYSACCHARIDE-POLYELECTROLYTE COMPLEXES IN ORGANIC SOLVENT SYSTEMS. J. COLLOID INTERFACE SCI. 36:24-39.

SEE ALSO: 1207 1535 1697 1839 1869 2500

F. Viruses, Microbial Cells, Tumor Cells, and Tissue Cultures

(1413) BENGTSSON, S., AND L. PHILIPSON. 1963. COUNTERCURRENT DISTRIBUTION OF POLIOVIRUS TYPE 1. VIROLOGY 20:176-184.

(1414) ------, L. PHILIPSON, H. PERSSON, AND T. C. LAURENT. 1964. THE BASIS FOR THE INTERACTION BETWEEN ATTENUATED POLIOVIRUS AND POLYIONS. VIROLOGY 24:617-625.

(1415) ------. 1965. MECHANISM OF DEXTRAN SULFATE INHIBITION OF ATTENUATED POLIOVIRUS. PROC. SOC. EXP. BIOL. MED. 118:47-53.

(1416) BREMERSKOV, V. 1973. DEXTRAN SULFATE INHIBITS CELL ADHESION IN TISSUE CULTURE. NATURE (LONDON) NEW BIOL. 246(154):174.

(1417) CAMPBELL, J. B., AND J. S. COLTER. 1967. ISOLATION OF A SERIES OF MENGO VIRUS VARIANTS DIFFERING IN SENSITIVITY TO POLYANIONS. CAN. J. MICROBIOL. 13:651-657.

(1418) DAVIS, J. L., AND W. C. PATRICK, III. 1965. NEW METHOD FOR PURIFYING COXIELLA BURNETTI BY DEXTRAN SULFATE PRECIPITATION FOLLOWED BY CENTRIFUGATION. APPL. MICRIBIOL. 13:99-102.

(1419) DIAMANTSTEIN, T., AND B. WAGNER. 1973. USE OF POLYANIONS TO BREAK IMMUNOLOGICAL TOLERANCE. NATURE (LONDON) NEW BIOL. 241(108):117.

(1420) ------, H. RUEHL, W. VOGT, AND G. BOCHERT. 1973. STIMULATION OF B-CELLS BY DEXTRAN SULFATE IN VITRO. IMMUNOLOGY 25(4):743-747.

(1421) ------, W. VOGT, H. RUEHL, AND G. BOCHERT. 1973. STIMULATION OF DNA SYNTHESIS IN MOUSE LYMPHOID CELLS BY POLYANIONS IN VITRO. I. TARGET CELLS AND POSSIBLE MODE OF ACTION. (FOR PART II, SEE W. VOGT AND OTHERS, SECTION XV F.) EUR. J. IMMUNOL. 3(8):488-493. ALSO IN CHEM. ABSTR. 1974. 80:25841Q.

(1422) ------, E. BLITSTEIN-WILLINGER, AND G. SCHULZ. 1974. POLYANIONS AND LIPOPOLYSACCHARIDE ACTS ON DIFFERENT SUBPOPULATIONS OF B CELLS. NATURE (LONDON) 250:596-597.

(1423) HUTTON, R. D., D. L. EWERT, AND G. R. FRENCH. 1972. DIFFERENTIATION OF TYPES 1 AND 2 HERPES SIMPLEX VIRUS BY PLAQUE INHIBITION WITH SULFATED POLYANIONS. PROC. SOC. EXP. BIOL. MED. 142:27-29.

(1424) LIEBHABER, H., AND K. K. TAKEMOTO. 1963. THE BASIS FOR THE SIZE DIFFERENCES IN PLAQUES PRODUCED BY VARIANTS OF ENCEPHALOMYOCARDITIS (EMC) VIRUS. VIROLOGY 20:559-566.

(1425) NAHMIAS, A. J., S. KIBRICK, AND P. BERNFELD. 1964. EFFECT OF SYNTHETIC AND BIOLOGICAL POLYANIONS ON HERPES SIMPLEX VIRUS. PROC. SOC. EXP. BIOL. MED. 115:993-996.

(1426) OZAKI, Y., AND K. KUMAGAI. 1972. EFFECT OF POLYIONS ON JAPANESE ENCEPHALITIS VIRUS. DIFFERENCE IN INTERACTION OF VIRUS WITH DEAE-DEXTRAN AND DEXTRAN SULFATE BETWEEN PS (PORCINE KIDNEY STABLE) CELL-ADAPTED AND NONADAPTED VIRUS. ARCH. GESAMTE VIRUSFORSCH. 39(1-3):83-91. ALSO IN CHEM. ABSTR. 1973. 78:40352H.

(1427) PAGANO, J. S., AND W. D. SEDWICK. 1966. IDENTIFICATION OF LSC2AB STRAIN OF TYPE 1 POLIOVIRUS BY INHIBITION WITH HORSE SERUM AND DEXTRAN SULFATE. PROC. SOC. EXP. BIOL. MED. 122:1232-1236.

(1428) PICK, E. 1974. MECHANISM OF ACTION OF SOLUBLE LYMPHOCYTIC MEDIATORS. II. MODIFICATION OF MACROPHAGE MIGRATION AND MIGRATION INHIBITORY FACTOR ACTION BY DRUGS, ENZYMES, AND CATIONIC ENVIRONMENT. CELL. IMMUNOL. 11(1):30-46. ALSO HM BGDL. AARSQ. 1974. 80:131556J.

(1429) RALPH, P., I. NAKOINZ, AND W. C. RASCHKE. 1974. LYMPHOSARCOMA CELL GROWTH IS SELECTIVELY INHIBITED BY B LYMPHOCYTE MITOGENS: LIPOPOLYSACCHARIDE (LPS), DEXTRAN SULFATE AND PURIFIED PROTEIN DERIVATIVE (PPD). BIOCHEM. BIOPHYS. RES. COMMUN. 61(4):1268-1275.

(1430) SASAKI, S. 1967. PRODUCTION OF LYMPHOCYTOSIS BY POLYSACCHARIDE POLYSULFATES (HEPARINOIDS). NATURE (LONDON) 214:1041-1042.

(1431) SCHOLNICK, P., D. LANG, AND E. RACKER. 1973. REGULATORY MECHANISMS IN CARBOHYDRATE METABOLISM. IX. STIMULATION OF AEROBIC GLYCOLYSIS BY ENERGY-LINKED ION TRANSPORT AND INHIBITION BY DEXTRAN SULFATE. J. BIOL. CHEM. 248:5175-5182.

(1432) SERGIESCU, D., F. HORODNICEANU, AND R. CRAINIC. 1967. MUTATION TOWARDS DEXTRAN SULFATE RESISTANCE IN TYPE 1 POLIOVIRUS. NATURE (LONDON) 215:313-315.

(1433) SHIREY, W. N., W. G. DORSEY, AND W. C. PATRICK, III. 1965. A PRACTICAL METHOD FOR PARTIAL PURIFICATION OF THE ORGANISM OF PSITTACOSIS GROWN IN CHICKEN EMBRYO YOLK SAC. BIOTECHNOL. BIOENG. 7:447-454.

(1434) SUEMASU, K., AND S. ISHIKAWA. 1970. INHIBITIVE EFFECT OF HERPARIN AND DEXTRAN SULFATE ON EXPERIMENTAL PULMONARY METASTASES. GANN 61(2):125-130. ALSO IN CHEM. ABSTR. 1970. 73:12953.

(1435) ------, K. WATANABE, AND S. ISHIKAWA. 1971. CONTRIBUTION OF POLYANIONIC CHARACTER OF DEXTRAN SULFATE TO INHIBITION OF CANCER METASTASIS. GANN 62(5):331-336. ALSO IN CHEM. ABSTR. 1972. 76:81159C.

(1436) TAKEMOTO, K. K., AND H. LIEBHABER. 1962. VIRUS-POLYSACCHARIDE INTERACTIONS. II. ENHANCEMENT OF PLAQUE FORMATION AND THE DETECTION OF VARIANTS OF POLIOVIRUS WITH DEXTRAN SULFATE. VIROLOGY 17:499-501.

(1437) ------ AND P. FABISCH. 1964. INHIBITION OF HERPES VIRUS BY NATURAL AND SYNTHETIC ACID POLYSACCHARIDES. PROC. SOC. EXP. BIOL. MED. 116:140-144.

(1438) ------ AND S. S. SPICER. 1965. EFFECTS OF NATURAL AND SYNTHETIC SULFATED POLYSACCHARIDES ON VIRUSES AND CELLS. ANN. N. Y. ACAD. SCI. 130(1):365-373.

(1439) VAHERI, A. 1964. HEPARIN AND RELATED POLYIONIC SUBSTANCES AS VIRUS INHIBITORS. (A REVIEW.) ACTA PATHOL. MICROBIOL. SCAND. SUPPL. 171:98 PP. ALSO IN CHEM. ABSTR. 1965. 62:10845H.

(1440) VIGIER, P. 1973. EFFECT OF NONSPECIFIC FACTORS ON FOCUS FORMATION BY ROUS SARCOMA VIRUS. II. POLYANIONS, DIVALENT CATIONS, TEMPERATURE, AND TRYPTOSE PHOSPHATE BROTH. INTERVIROLOGY 1(5-6):338-347. ALSO IN CHEM. ABSTR. 1947. 80:142907B.

(1441) VOGT, W., H. RUEHL, B. WAGNER, AND T. DIAMANTSTEIN. 1973. STIMULATION OF DNA SYNTHESIS IN MOUSE LYMPHOID CELLS BY POLYANIONS IN VITRO. II. RELATIONS BETWEEN ADJUVANT ACTIVITY AND STIMULATION OF DNA SYNTHESIS BY POLYANIONS. (FOR PART I, SEE T. DIAMANTSTEIN AND OTHERS, SECTION XV F.) EUR. J. IMMUNOL. 3(8):493-496. ALSO IN CHEM. ABSTR. 1974. 80:25842R.

(1442) VOSS, H. 1964. [THE INFLUENCE OF DEXTRAN SULFATE ON THE ORAL POLIOMYELITIS-VACCINE STRAINS OF SABIN] (IN GERMAN). Z. NATURFORSCH. 19B:226-229. ALSO IN CHEM. ABSTR. 1964. 61:2201H.

(1443) YAMAMOTO, M., A. NAGASHIMA, AND S. NAGAMATSU. 1973. [EXPERIMENTAL AND CLINICAL STUDIES ON THE METHODS TO POTENTIATE THE EFFECT OF ANTITUMOR DRUGS. COMBINATION THERAPY WITH DEXTRAN SULFATE] (IN JAPANESE). SAISHIN IGAKU 28(326):996-1009. ALSO IN CHEM. ABSTR. 1973. 79:121979R.

SEE ALSO: 1070 1074 1220 1400 1404 1574

G. Analytical

Analysis of dextran sulfates; use of dextran sulfates in analysis of other substances.

(1444) EDSTROM, R. D. 1969. A COLORIMETRIC METHOD FOR THE DETERMINATION OF MUCOPOLYSACCHARIDES AND OTHER ACIDIC POLYMERS. ANAL. BIOCHEM. 29:421-432.

(1445) ELLIS, H. A., AND K. W. WALTON. 1959. THE ESTIMATION AND RECOVERY OF DEXTRAN SULFATES IN BIOLOGICAL FLUIDS. J. CLIN. PATHOL. 12:467-472. ALSO IN CHEM. ABSTR. 1960. 54:5803F.

(1446) EVANS, E. E., AND S. P. KENT. 1962. THE USE OF BASIC POLYSACCHARIDES IN HISTOCHEMISTRY AND CYTOCHEMISTRY: IV. PRECIPITATION AND AGGLUTINATION OF BIOLOGICAL MATERIALS BY ASPERGILLUS POLYSACCHARIDE AND DEACETYLATED CHITIN. J. HISTOCHEM. CYTOCHEM. 10:24-28.

(1447) GRAHAM, H. D. 1967. REACTION OF TETRAZOLIUM SALTS WITH SULFATED POLYSACCHARIDES AND OTHER HYDROCOLLOIDS. J. FOOD SCI. 32:489-495.

(1448) OHKUMA, S., K. FUKAWA, AND T. FURUHATA. 1970. METACHROMATIC INTERACTION BETWEEN TOLUIDINE BLUE AND DEXTRAN SULFATES. PROC. JPN. ACAD. 46(7):717-721. ALSO IN CHEM. ABSTR. 1971. 74:83882R.

SEE ALSO: 1063 1064 1321 1322 1331 1334
1335 1338 1339 1342 1347 1348 1349 1358
1360 1368 1410

XVI. Dextran, isomaltooligosaccharides, and dextran derivatives covalently bonded (coupled) to enzymes, nucleic acids, proteins, peptides, and the like

A. Dextran and Isomaltooligosaccharides

(1449) AHRGREN, L., L. KAGEDAL, AND S. AKERSTROEM. 1972. COVALENT BINDING OF PROTEINS TO POLYSACCHARIDES BY CYANOGEN BROMIDE AND ORGANIC CYANATES. II. MODEL STUDIES WITH METHYL 4,6-O-BENZILIDENE-ALPHA-D-GLUCOPYRANOSIDE AND CYANOGEN BROMIDE. ACTA CHEM. SCAND. 26:285-288.

(1450) ARMSTRONG, K. J., M. W. NOALL, AND J. E. STOUFFER. 1972. DEXTRAN-LINKED INSULIN: A SOLUBLE HIGH MOLECULAR WEIGHT DERIVATIVE WITH BIOLOGICAL ACTIVITY IN VIVO AND IN VITRO. BIOCHEM. BIOPHYS. RES. COMMUN. 47:354-360.

(1451) ASHWELL, G. 1972. CARBOHYDRATE ANTIGENS: COUPLING OF CARBOHYDRATES TO PROTEINS BY A MIXED ANHYDRIDE REACTION. METHODS ENZYMOL. 28B:219-222.

(1452) BROSTROEM, K., S. EKMAN, L. KAGEDAL, AND S. AKERSTROEM. 1974. COVALENT BINDING OF PROTEINS TO POLYSACCHARIDES BY CYANOGEN BROMIDE AND ORGANIC CYANATES. III. STRUCTURAL STUDIES ON THE LINKAGE REGION. ACTA CHEM. SCAND. B 28:102-108.

(1453) CHRISTENSEN, T. B., AND G. VEGARUD. 1974. CARBOHYDRATE CONSTITUENTS. EFFECT ON THE PROTEOLYTIC RESISTANCE OF GLYCOPROTEINS. IRCS LIBR. COMPEND. 2(5):1311. ALSO IN CHEM. ABSTR. 1974. 81:147665B.

(1454) GHANTA, V. K., N. M. HAMLIN, T. G. PRETLOW, AND R. N. HIRAMOTO. 1972. USE OF DEXTRAN-CONJUGATED SRBC FOR THE DETECTION OF MOPC 104E TUMOR CELLS. J. IMMUNOL. 109:810-815.

(1455) HIMMELSPACH, K., AND G. KLEINHAMMER. 1972. CARBOHYDRATE ANTIGENS: COUPLING OF CARBOHYDRATES TO PROTEINS BY DIAZOTIZING AMINOPHENYLFLAVAZOLE DERIVATIVES. METHODS ENZYMOL. 28B:222-231.

(1456) HIRAMOTO, R. N., V. K. GHANTA, J. R. MCGHEE, AND OTHERS. 1972. USE ON DEXTRAN CONJUGATED COLUMNS FOR THE ISOLATION OF LARGE QUANTITIES OF MOPC 104E IGM. IMMUNOL. CHEM. 9:1251-1253.

(1457) KAGEDAL, L., AND S. AKERSTROEM. 1970. A METHOD FOR COUPLING BIOLOGICALLY IMPORTANT MOLECULES TO POLYSACCHARIDES. ACTA CHEM. SCAND. 24:1601-1608.

(1458) ------ AND S. AKERSTROEM. 1971. BINDING OF COVALENT PROTEINS TO POLYSACCHARIDES BY CYANOGEN BROMIDE AND ORGANIC CYANATES. I. PREPARATION OF SOLUBLE GLYCINE-, INSULIN- AND AMPICILLIN-DEXTRAN. ACTA CHEM. SCAND. 25:1855-1859.

(1459) KURINENKO, B. M., N. V. KALACHEVA, AND G. K. GABDULLINA. 1975. [STABILIZATION OF NUCLEASES BY COVALENT BINDING TO SOLUBLE DEXTRAN] (IN RUSSIAN). BIORG. KHIM. 1:483-488. ALSO IN CHEM. ABSTR. 1975. 83:93062Y.

(1460) LARSSON, P-O., AND K. MOSBACH. 1974. THE PREPARATION AND CHARACTERIZATION OF A WATER-SOLUBLE COENZYMICALLY ACTIVE DEXTRAN-NAD+. FEBS LETT. 46:119-122.

(1461) MARSHALL, J. J., AND M. L. RABINOWITZ. 1975. ENZYME STABILIZATION BY COVALENT ATTACHMENT OF CARBOHYDRATE. ARCH. BIOCHEM. BIOPHYS. 167:777-779.

(1462) ------. 1975. STARCH-DEGRADING ENZYMES, OLD AND NEW. (AMYLOLYTIC ENZYME-DEXTRAN CONJUGATES.) (IN ENGLISH, SUMMARY IN GERMAN AND IN FRENCH.) STAERKE 27(11):377-383.

(1463) ------ AND M. L. RABINOWITZ. 1976. PREPARATION AND CHARACTERIZATION OF A DEXTRAN-TRYPSIN CONJUGATE. J. BIOL. CHEM. 251:1081-1087.

(1464) ------. 1976. SYNTHETIC GLYCOPROTEINS. PART III. PREPARATION AND CHARACTERIZATION OF A DEXTRAN-AMYLASE CONJUGATE. CARBOHYDR. RES. 49:389-398.

(1465) ------ AND M. L. RABINOWITZ. 1976. SYNTHETIC GLYCOPROTEINS. PART IV. MODIFICATION OF THE PROPERTIES OF TRYPSIN BY COVALENT ATTACHMENT OF POLYSACCHARIDE. [AN ABSTRACT.] MIAMI WINTER SYMP. 11:399.

(1466) ------ AND M. L. RABINOWITZ. 1976. SYNTHETIC GLYCOPROTEINS. PART V. STABILIZATION OF CATALASE BY COVALENT ATTACHMENT TO DEXTRAN. BIOTECHNOL. BIOENG. 18:1325-1329.

(1467) O'NEILL, S. P., J. R. WYKES, P. DUNNILL, AND M. D. LILLY. 1971. AN ULTRAFILTRATION-REACTOR SYSTEM USING A SOLUBLE IMMOBILIZED ENZYME. BIOTECHNOL. BIOENG. 13:319-322.

(1468) RICHTER, W., AND L. KAGEDAL. 1972. PREPARATION OF DEXTRAN-PROTEIN CONJUGATES AND STUDIES OF THEIR IMMUNOGENICITY. INT. ARCH. ALLERGY APPL. IMMUNOL. 42:887-904. ALSO IN CHEM. ABSTR. 1972. 77:46603S.

(1469) SANDERSON, C. J., AND D. V. WILSON. 1971. METHODS FOR COUPLING PROTEIN OR POLYSACCHARIDE TO RED CELLS BY PERIODATE OXIDATION. IMMUNOCHEMISTRY 8:163-168. ALSO IN CHEM. ABSTR. 1971. 74:138469U.

(1470) SORG, C., E. RUEDE, AND O. WESTPHAL. 1970. IMMUNOLOGICAL PROPERTIES OF AMYLOSE, DEXTRAN AND POLYVINYLALCOHOL CONJUGATED WITH POLYTYROSYL-PEPTIDES. EUR. J. BIOCHEM. 17:85-90.

(1471) VEGARUD, G., AND T. B. CHRISTENSEN. 1975. THE RESISTANCE OF GLYCOPROTEINS TO PROTEOLYTIC INACTIVATION. ACTA CHEM. SCAND. B 29:887-888.

(1472) ------ AND T. B. CHRISTENSEN. 1975. GLYCOSYLATION OF PROTEINS: A NEW METHOD OF ENZYME STABILIZATION. BIOTECHNOL. BIOENG. 17:1391-1397.

(1473) WYKES, J. R., P. DUNHILL, AND M. D. LILLY. 1971. IMMOBILIZATION OF ALPHA-AMYLASE BY ATTACHMENT TO SOLUBLE SUPPORT MATERIALS. BIOCHEM. BIOPHYS. ACTA 250:522-529.

SEE ALSO: 338 1110 1133 1474 THROUGH 1483 1681 1698 1748 1750 1790 1810

B. Sephadex[3] and Other Derivatives

(Ionic bonding included.)

(1474) AXEN, R., AND J. PORATH. 1964. CHEMICAL COUPLING OF AMINO ACIDS, PEPTIDES AND PROTEINS TO SEPHADEX. ACTA CHEM. SCAND. 18:2193-2195.

(1475) ------ AND J. PORATH. 1966. CHEMICAL COUPLING OF ENZYMES TO CROSSLINKED DEXTRAN (SEPHADEX). NATURE (LONDON) 210:367-369.

(1476) ------, J. PORATH, AND S. ERNBACK. 1967. CHEMICAL COUPLING OF PEPTIDES AND PROTEINS TO POLYSACCHARIDES BY MEANS OF CYANOGEN HALIDES. NATURE (LONDON) 214:1302-1304.

(1477) ------, P-A. MYRIN, AND J-C. JANSON. 1970. CHEMICAL FIXATION OF CHYMOTRYPSIN TO WATER-INSOLUBLE CROSSLINKED DEXTRAN (SEPHADEX) AND SOLUBILIZATION OF THE ENZYME DERIVATIVES BY MEANS OF DEXTRANASE. BIOPOLYMERS 9:401-413.

(1478) ------ AND S. ERNBACK. 1971. CHEMICAL FIXATION OF ENZYMES TO CYANOGEN HALIDE ACTIVATED POLYSACCHARIDE CARRIERS. EUR. J. BIOCHEM. 18:351-360.

(1479) CHIBATA, I., T. TOSA, T. SATO, AND OTHERS. 1975. APPLICATIONS OF IMMOBILIZED ENZYMES AND IMMOBILIZED MICROBIAL CELLS FOR L-AMINO ACID PRODUCTION. (STRONG IONIC BONDING.) IN H. H. WEETALL AND S. SUZUKI, EDS, IMMOBILIZED ENZYME TECHNOLOGY: RESEARCH AND APPLICATIONS, PP. 111-127. PLENUM PRESS, NEW YORK AND LONDON.

---

[3] Trade names are used in this publication solely for the purpose of providing specific information. Mention of a commercial product or company does not constitute an endorsement of the product by the U.S. Department of Agriculture or a preference over other products not mentioned.

(1480) FRANKS, N. E. 1972. PROTEASES BOUND TO DIAZOTIZED SEPHADEX ANTHRANILATE ESTERS. BIOTECHNOL. BIOENG. 14:1027-1030.

(1481) RICKWOOD, D. 1972. AN IMPROVED METHOD FOR THE INSOLUBILIZATION OF DNA FOR AFFINITY CHROMATOGRAPHY. BIOCHIM. BIOPHYS. ACTA 269:47-50.

(1482) SANDERSON, C. J., AND D. V. WILSON. 1971. SIMPLE METHOD FOR COUPLING PROTEINS TO INSOLUBLE POLYSACCHARIDES. IMMUNOLOGY 20:1061-1065. ALSO IN CHEM. ABSTR. 1971. 75:86669H.

(1483) TOSA, T., T. MORI, N. FUSE, AND I. CHIBATA. 1967. STUDIES ON CONTINUOUS ENZYME REACTIONS. IV. PREPARATION OF A DEAE-SEPHADEX-AMINOACYLASE COLUMN AND CONTINUOUS OPTICAL RESOLUTION OF ACYL-DL-AMINO ACIDS. (STRONG IONIC BONDING.) BIOTECHNOL. BIOENG. 9:603-615.

SEE ALSO: 1449 1452 1457 1459 1469 1473

XVII. Action of dextran on other macromolecules in solution, blood components, and thymus and tumor cells

A. Specific Action (Acceptor) With α-Glucan Phosphorylase

(1484) BOURNE, E. J., D. A. SITCH, AND S. PEAT. 1949. THE ENZYMIC SYNTHESIS AND DEGRADATION OF STARCH. PART III. THE ROLE OF CARBOHYDRATE ACTIVATORS. J. CHEM. SOC. 1448-1457.

(1485) DE MAN, J. C. H., W. T. DAEMS, R. G. J. WILLIGHAGEN, AND T. G. VAN RIJSSEL. 1960. ELECTRON-DENSE BODIES IN LIVER TISSUE OF THE MOUSE IN RELATION TO THE ACTIVITY OF ACID PHOSPHATASE. J. ULTRASTRUCT. RES. 4:43-57. ALSO IN CHEM. ABSTR. 1961. 55:5697E.

(1486) DUIJN, P. V., R. G. J. WILLIGHAGEN, AND A. E. F. H. MEIJER. 1959. INCREASE IN ACID PHOSPHATASE ACTIVITY IN MOUSE LIVER AFTER DEXTRAN STORAGE. BIOCHEM. PHARMACOL. 2:177-181. ALSO IN CHEM. ABSTR. 1960. 54:23055F.

(1487) HESTRIN, S. 1949. ACTION PATTERN OF CRYSTALLINE MUSCLE PHOSPHORYLASE. J. BIOL. CHEM. 179:943-955.

(1488) MEIJER, A. E. F. H., AND R. G. J. WILLIGHAGEN. 1961. INCREASED ACTIVITY OF ACID PHOSPHATASE AND BETA-GLUCURONIDASE IN THE LIVER AND SPLEEN OF MICE AFTER INTRAPERITONEAL ADMINISTRATION OF VARIOUS MACROMOLECULAR SUBSTANCES . BIOCHEM. PHARMACOL. 8:389-397. ALSO IN CHEM. ABSTR. 1962. 56:6609C.

(1489) ------. 1962. CHANGE IN SHAPE OF THE PH-ACTIVITY CURVE OF ACID PHOSPHATASE IN THE LIVER AND SPLEEN OF MICE AFTER INTRAPERITONEAL ADMINISTRATION OF MACROMOLECULAR SUBSTANCES. BIOCHEM. PHARMACOL. 11:125-134. ALSO IN CHEM. ABSTR. 1962. 56:16101H.

(1490) ------ AND R. G. J. WILLIGHAGEN. 1963. THE ACTIVITY OF GLUCOSE-6-PHOSPHATASE, ADENOSINETRIPHOSPHATASE, SUCCINIC DEHYDROGENASE, AND ACID PHOSPHATASE AFTER DEXTRAN OR POLY(VINYLPYRROLIDINONE) UPTAKE BY LIVER IN VIVO. BIOCHEM. PHARMACOL. 12:973-980. ALSO IN CHEM. ABSTR. 1963. 59:10545G.

(1491) ------. 1968. IMPROVED HISTOCHEMICAL METHOD FOR THE DEMONSTRATION OF THE ACTIVITY OF ALPHA-GLUCAN PHOSPHORYLASE. I. THE USE OF GLUCOSYL ACCEPTOR DEXTRAN. HISTOCHEMIE 12:244-252.

(1492) ------. 1968. IMPROVED HISTOCHEMICAL METHOD FOR THE DEMONSTRATION OF THE ACTIVITY OF ALPHA-GLUCAN PHOSPHORYLASE. II. RELATION OF MOLECULAR WEIGHT OF GLUCOSYL ACCEPTOR DEXTRAN TO ACTIVATION OF PHOSPHORYLASE. HISTOCHEMIE 16:134-143.

(1493) PROEHL, E. C., AND H. G. DAY. 1946. STUDIES ON THE NATURE OF CARBOHYDRATE ACTIVATORS OF POTATO PHOSPHORYLASE. J. BIOL. CHEM. 163:667-674.

(1494) SWANSON, M. A., AND C. F. CORI. 1948. STUDIES ON THE STRUCTURE OF POLYSACCHARIDES. III. RELATION OF STRUCTURE TO ACTIVATION OF PHOSPHORYLASES. J. BIOL. CHEM. 172:815-824.

(1495) WILLIGHAGEN, R. G. J., AND P. V. DUIJN. 1958. [PHOSPHATASE IN MOUSE LIVER AFTER ADMINISTRATION OF DEXTRAN] (IN DUTCH). NED. TIJDSCHR. GENEESKD. 102(23):1122-1123.

B. Enzymes (Apparently Nonspecific Actions); Nucleic Acids and Viruses; Proteins and Lipoproteins, Including those of Blood Plasma and Sera; Cholesterol; and Excluded Volume Effects

(1496) BANERJEE, R. P. 1955. INTERACTION OF MACROMOLECULES WITH PLASMA PROTEINS. BULL. CALCUTTA SCH. TROP. MED. 3:21. ALSO IN CHEM. ABSTR. 1955. 14830D.

(1497) CARBONE, J. V., L. L. UZMAN, AND I. C. PLOUGH. 1955. CHANGES IN SERUM PROTEINS PRODUCED BY INFUSIONS OF DEXTRAN. PROC. SOC. EXP. BIOL. MED. 90:68-70.

(1498) CESKA, M., AND F. GROSSMUELLER. 1968. IMMUNO-PRECIPITATES IN AGAR-DEXTRAN MEDIA. EXPERIENTIA 24:391-392.

(1499) ------. 1968. DETECTION OF INSULIN PRECIPITATING ANTIBODIES. NATURE (LONDON) 356-357.

(1500) ------. 1968. INSULIN-ANTI-INSULIN PRECIPITATES IN THE PRESENCE OF VARIOUS DEXTRANS. IMMUNOLOGY 15(6):837-843. ALSO IN CHEM. ABSTR. 1969. 70:94956M.

(1501) ------. 1969. IMMUNO-PRECIPITATES OF SOME PURIFIED AND UNPURIFIED HUMAN PLASMA PROTEINS WITH MONOSPECIFIC AND POLYVALENT HUMAN PLASMA PROTEIN ANTISERA. J. IMMUNOL. 103:100-106.

(1502) ------. 1971. ENZYMATIC REACTIONS IN THE PRESENCE OF NONIONIC POLYMERS. EXPERIENTIA 27:767-768.

(1503) DISALVO, J., AND M. SCHUBERT. 1966. INTERACTION DURING FIBRIL FORMATION OF SOLUBLE COLLAGEN WITH CARTILAGE PROTEINPOLYSACCHARIDE. BIOPOLYMERS 4:247-258.

(1504) DOYLE, R. J., E. E. WOODSIDE, AND C. W. FISHEL. 1967. POLYSACCHARIDE-GELATIN COMPLEXES IN ACIDIFIED ETHANOL SOLUTIONS. CARBOHYDR. RES. 5:274-281.

(1505) DUDMAN, W. F. 1966. PRECIPITATION OF TOBACCO MOSAIC VIRUS BY MACROMOLECULES: A METHOD FOR ESTIMATING MOLECULAR VOLUMES. NATURE (LONDON) 211:1049-1067.

(1506) EDMOND, E., AND A. G. OGSTON. 1968. AN APPROACH TO THE STUDY OF PHASE SEPARATION IN TERNARY AQUEOUS SYSTEMS. BIOCHEM. J. 109:569-576.

(1507) FESSEL, W. J. 1965. DEXTRAN TURBIDITY: ACUTE DISTRESS-PHASE REACTION. NATURE (LONDON) 205:771-773.

(1508) FLETCHER, F., AND L. E. MARTIN. 1952. INTERACTION OF MACROMOLECULES AND FIBRINOGEN. NATURE (LONDON) 170:319.

(1509) GAUDIANO, A., S. TARTARINI, M. T. GHIO, AND G. PETTI. 1967. [LIVER CHANGES INDUCED BY PARENTERAL TREATMENT OF RATS WITH NONPHYSIOLOGICAL MACROMOLECULES. I. BEHAVIOR OF SOME LIVER ENZYMES FOLLOWING DEXTRAN TREATMENT] (IN ITALIAN). BOLL. SOC. ITAL. BIOL. SPER. 43(12):678-682. ALSO IN CHEM. ABSTR. 1968. 68:11498Y.

(1510) ------, S. TARTARINI, M. T. GHIO, AND G. PETTI. 1967. [LIVER CHANGES INDUCED BY THE PARENTERAL TREATMENT OF RATS WITH NONPHYSIOLOGICAL MACROMOLECULES. II. BEHAVIOR OF SOME LIVER ENZYMES FOLLOWING TREATMENT WITH DEXTRAN AND CHLORPROMAZINE] (IN ITALIAN). BOLL. SOC. ITAL. BIOL. SPER. 43(12):682-685. ALSO IN CHEM. ABSTR. 1967. 67:115585V.

(1511) ------, G. PETTI, M. POLIZZI, AND OTHERS. 1968. [BIOCHEMICAL RESEARCH ON LIVER ALTERATIONS IN RATS TREATED PARENTERALLY WITH NONPHYSIOLOGICAL MACROMOLECULAR SUBSTANCES. III. BEHAVIOR OF SOME LIVER ENZYMES FOLLOWING TREATMENT WITH DEXTRAN OF DIFFERENT MOLECULAR WEIGHTS, POLY(VINYL-PYRROLIDINONE), AND HEMAGEL] (IN ITALIAN). BOLL. SOC. ITAL. BIOL. SPER. 44(9):844-846. ALSO IN CHEM. ABSTR. 1968. 69:65674S.

(1512) GRAVES, I. L. 1968. INTERACTION OF HEAT-DENATURATED HE-LA CELL DNA WITH SYNTHETIC AND NATURAL POLYSACCHARIDES. BIOPOLYMERS 6:1573-1578.

(1513) GRINBERG, V. Y., V. B. TOLSTOGUZOV, AND G. L. SLONIMSKII. 1970. [THERMODYNAMIC COMPATIBILITY OF GELATIN AND DEXTRAN IN AQUEOUS MEDIUM] (IN RUSSIAN). VYSOKOMOL. SOEDIN. SER. A 12(7):1593-1599. ALSO IN CHEM. ABSTR. 1970. 73:108403E.

(1514) HELLSING, K., AND T. C. LAURENT. 1964. THE INFLUENCE OF DEXTRAN ON THE PRECIPITIN REACTION. ACTA CHEM. SCAND. 18:1303-1304.

(1515) ------. 1965. GEL FILTRATION WITH BUFFERS CONTAINING DEXTRAN. ACTA CHEM. SCAND. 19:1791-1792.

(1516) ------. 1966. IMMUNE REACTIONS IN POLYSACCHARIDE MEDIA. I. THE EFFECT OF DEXTRAN ON THE REACTION BETWEEN IODINE-125 LABELLED HUMAN SERUM ALBUMIN AND GAMMA-G GLOBULIN FROM RABBIT ANTI-ALBUMIN SERA. ACTA CHEM. SCAND. 20:1251-1262.

(1517) ------. 1968. GEL CHROMATOGRAPHY IN ELUENTS CONTAINING POLYMERS. J. CHROMATOGR. 36:170-180.

(1518) ------. 1969. IMMUNE REACTIONS IN POLYSACCHARIDE MEDIA. THE EFFECT OF HYALURONATE, CHONDROITIN SULPHATE AND CHONDROITIN SULFATE-PROTEIN COMPLEX ON THE PRECIPITIN REACTION. BIOCHEM. J. 112:475-482.

(1519) ------. 1969. IMMUNE REACTIONS IN POLYSACCHARIDE MEDIA. INVESTIGATION ON COMPLEX-FORMATION BETWEEN SOME POLYSACCHARIDES, ALBUMIN AND IMMUNOGLOBULIN G. BIOCHEM. J. 112:483-487.

(1520) ------. 1969. IMMUNE REACTIONS IN POLYSACCHARIDE MEDIA. THE COMPOSITION OF THE ANTIGEN-ANTIBODY COMPLEXES IN THE PRECIPITIN REACTION. BIOCHEM. J. 114:141-144.

(1521) ------. 1969. IMMUNE REACTIONS IN POLYSACCHARIDE MEDIA: POLYSACCHARIDE ENHANCED PRECIPITIN REACTIONS WITH ANTIGENS OF VARIOUS SIZES. BIOCHEM. J. 114:145-150.

(1522) ------. 1969. IMMUNE REACTIONS IN POLYSACCHARIDE MEDIA. EXPERIMENTS WITH SPECIFIC ANTIBODIES OF DIFFERENT AFFINITIES FOR SERUM ALBUMIN. BIOCHEM. J. 114:151-155.

(1523) ------. 1974. EFFECTS OF DIFFERENT POLYMERS FOR ENHANCEMENT OF THE ANTIGEN-ANTIBODY REACTION AS MEASURED WITH NEPHELOMETRY. PROTIDES BIOL. FLUIDS PROC. COLLOQ. 21:579-583. ALSO IN CHEM. ABSTR. 1974. 81:102886H.

(1524) IVERIUS, P. H., AND T. C. LAURENT. 1967. PRECIPITATION OF SOME PLASMA PROTEINS BY THE ADDITION OF DEXTRAN OR POLYETHYLENE GLYCOL. BIOCHIM. BIOPHYS. ACTA 133:371-373.

(1525) ------. 1968. SOLUBILITY OF LOW DENSITY (BETA-) LIPOPROTEINS IN THE PRESENCE OF DEXTRAN. CLIN. CHIM. ACTA 20:261-267.

(1526) JONES, R. W., AND S. R. ERLANDER. 1967. INTERACTION BETWEEN WHEAT PROTEINS AND DEXTRANS. CEREAL CHEM. 44:447-456.

(1527) KELER-BACOKA, M., Z. PUCAR, AND A. BENAS. 1960. A PAPER STRIP ELECTROPHORETIC EXAMINATION OF THE ACTION OF DEXTRAN IN COLLOIDAL SOLUTION ON HUMAN SERA. EXPERIENTIA 16:488-489.

(1528) ------. 1962. ACTION OF DEXTRAN IN COLLOIDAL SOLUTION ON SERUM LIPIDS OF DIFFERENT ANIMAL SPECIES. ZENTRALBL. VETERINAERMED. 9:46-51. ALSO IN CHEM. ABSTR. 1962. 57:1246B.

(1529) ------. 1965. THE CHARACTERISTIC SPECIFICITY OF PLASMOCYTOMA LIPIDS CONCERNING THEIR RESISTANCE TO FORM DL-FRACTIONS WITH COLLOIDAL DEXTRAN. EXPERIENTIA 21:338-339.

(1530) ------ AND Z. PUCAR. 1966. LIPID CHANGES CAUSED BY COLLOIDAL DEXTRAN ADDED TO HUMAN SERA IN DIFFERENT VOLUME RATIOS. CLIN. CHIM. ACTA 14(1):24-26. ALSO IN CHEM. ABSTR. 1966. 65:7823E.

(1531) LAURELL, A. B. 1951. INFLUENCE OF DEXTRAN ON THE CONVERSION OF FIBRINOGEN TO FIBRIN. SCAND. J. CLIN. LAB. INVEST. 3(4):262-266.

(1532) LAURENT, T. C., AND H. PERSSON. 1963. ON THE INTERACTION BETWEEN POLYSACCHARIDES AND OTHER MACROMOLECULES. III. THE USE OF HYALURONIC ACID FOR THE SEPARATION OF MACROMOLECULES IN THE ULTRACENTRIFUGE. BIOCHIM. BIOPHYS. ACTA 78:360-366.

(1533) ------. 1963. THE INTERACTION BETWEEN POLYSACCHARIDES AND OTHER MACROMOLECULES. V. THE SOLUBILITY OF PROTEINS IN THE PRESENCE OF DEXTRAN. BIOCHEM. J. 89:253-257.

(1534) ------. 1963. THE INTERACTION BETWEEN POLYSACCHARIDES AND OTHER MACROMOLECULES. VI. FURTHER STUDIES ON THE SOLUBILITY OF PROTEINS IN DEXTRAN SOLUTIONS. ACTA CHEM. SCAND. 17:2664-2668.

(1535) ------ AND H. PERSSON. 1964. THE INTERACTION BETWEEN POLYSACCHARIDES AND OTHER MACROMOLECULES. VII. THE EFFECT OF VARIOUS POLYMERS ON THE SEDIMENTATION RATES OF SERUM ALBUMIN AND ALPHA-CRYSTALLIN. BIOCHIM. BIOPHYS. ACTA 83:141-147.

(1536) ------ AND J. KILLANDER. 1964. A THEORY OF GEL FILTRATION AND ITS EXPERIMENTAL VERIFICATION. J. CHROMATOGR. 14:317-330.

(1537) ------. 1964. THE INTERACTION BETWEEN POLYSACCHARIDES AND OTHER MACROMOLECULES. IX. THE EXCLUSION OF MOLECULES FROM HYALURONIC ACID GELS AND SOLUTIONS. BIOCHEM. J. 93:106-112.

(1538) ------. 1965. THE EXCLUSION OF MACROMOLECULES FROM POLYSACCHARIDE MEDIA. CHEM. PHYSIOL. MUCOPOLYSACCHARIDES. PROC. SYMP. (MILAN) 153-170. ALSO IN CHEM. ABSTR. 1968. 69:74000W.

(1539) ------. 1966. SOLUBILITY OF PROTEINS IN THE PRESENCE OF POLYSACCHARIDES. FED. PROC. 25(3):1127.

(1540) ------. 1966. IN VITRO STUDIES ON THE TRANSPORT OF MACROMOLECULES THROUGH THE CONNECTIVE TISSUE. FED. PROC. 25(3):1128-1134.

(1541) ------. 1971. ENZYME REACTIONS IN POLYMER MEDIA. EUR. J. BIOCHEM. 21:498-506.

(1542) ------ AND B. OEBRINK. 1972. ON THE RESTRICTION OF THE ROTATIONAL DIFFUSION OF PROTEINS IN POLYMER NETWORK. EUR. J. BIOCHEM. 28:94-101.

(1543) MEIJER, A. E. F. H. 1962. CHANGES IN THE PH-ACTIVITY CURVE OF BETA-D-GLUCURONIDASE IN THE LIVER AND SPLEEN OF MICE AFTER INTRAPERITONEAL ADMINISTRATION OF VARIOUS MACROMOLECULAR SUBSTANCES. BIOCHEM. PHARMACOL. 11:1141-1153. ALSO IN CHEM. ABSTR. 1963. 58:6048C.

(1544) MELIK-SARKISYAN, S. S., AND E. L. ROSENFEL'D. 1957. [THE EFFECT OF DEXTRAN ON BLOOD PROTEINS] (IN RUSSIAN). BIOCHIMIYA 22:730-735. ALSO IN CHEM. ABSTR. 1958. 52:4712E AND BIOCHEM. ENG. TRANS. 22:685-690.

(1545) MUZAFFAR, T. Z., A. L. STALKER, W. A. J. BRYCE, AND D. P. DHALL. 1972. DEXTRANS AND FIBRIN MORPHOLOGY. NATURE (LONDON) 238:288-291.

(1546) POLSON, A., G. M. POTGIETER, J. F. LARGIER, AND OTHERS. 1964. THE FRACTIONATION OF PROTEIN MIXTURES BY LINEAR POLYMERS OF HIGH MOLECULAR WEIGHT. BIOCHIM. BIOPHYS. ACTA 82:463-475.

(1547) PONDER, E., AND R. V. PONDER. 1960. THE INTERACTION OF DEXTRAN WITH SERUM ALBUMIN, GAMMA GOLUBLIN, AND FIBRINOGEN. J. GEN. PHYSIOL. 43:753-758.

(1548) ------. 1971. INTERACTION OF DEXTRANS WITH SERUM PROTEINS, AND THEIR INTERACTION WITH RED CELLS AND PLATELETS. IN J. R. DERRICK AND M. M. GUEST, EDS., DEXTRANS. CURRENT CONCEPTS OF BASIC ACTION AND CLINICAL APPLICATIONS, PP. 54-61. CHARLES C. THOMAS, PUBLISHER, SPRINGFIELD, ILLINOIS.

(1549) PUCAR, Z., AND M. KELER-BACOKA. 1961. EFFECT OF MOLECULAR WEIGHTS OF COLLOIDAL DEXTRAN ON HUMAN SERUM LIPIDS. SCIENCE 134:1369-1370.

(1550) RAMPLING, M. W. 1974. THE SOLUBILITY OF FIBRINOGEN IN SOLUTIONS CONTAINING DEXTRANS OF VARIOUS MOLECULAR WEIGHTS. BIOCHEM. J. 143:767-769.

(1551) RICKETTS, C. R. 1952. INTERACTION OF DEXTRAN AND FIBRINOGEN. NATURE (LONDON) 169:970.

(1552) ROSENFEL'D, E. L., AND E. G. PLYSHEVSKAYA. 1954. [CONCERNING CERTAIN CHARACTERISTICS OF DEXTRAN AND ITS INTERACTION WITH BLOOD PROTEINS] (IN RUSSIAN). DOKL. AKAD. NAUK SSSR 95(2):333-336.

(1553) SEMPLE, R. E. 1955. CHANGES IN PROTEIN FRACTIONS OF DOG PLASMA AFTER BLEEDING AND DEXTRAN INFUSION. J. LAB. CLIN. MED. 45:61-65.

(1554) SHAW, M. 1976. INTERPRETATION OF OSMOTIC PRESSURE IN SOLUTIONS OF ONE AND TWO NONDIFFUSIBLE COMPONENTS. BIOPHYS. J. 16(1):43-57.

(1555) TURINI, P., AND M. R. BRUZZESI. 1966. [STUDIES ON DEXTRAN AND DEXTRAN DERIVATIVES. VI. THE EFFECT OF DEXTRAN ON SOLUBILITY OF GAMMA-GLOBULIN] (IN ITALIAN). BOLL. SOC. ITAL. BIOL. SPER. 40(24 BIS):1985-1987. ALSO IN CHEM. ABSTR. 1966. 64:3895B.

(1556) WALES, M., S. ROTHMAN, R. J. STASNY, AND S. G. WEISSBERG. 1954. THE INTERACTION OF DEXTRAN WITH HUMAN SERUM ALBUMIN. U.S. NAT. BUR. STAND. REP. 3123.

(1557) WARDLAW, A. C. 1957. INCREASE IN SERUM BACTERICIDAL ACTIVITY IN THE PRESENCE OF CLINICAL DEXTRAN. BR. J. EXP. PATHOL. 38:601-610. ALSO IN CHEM. ABSTR. 1958. 52:10386B AND ABSTRACTED IN J. GEN. MICROBIOL. 17:XII.

(1558) WETMUR, J. G. 1975. ACCELERATION OF DNA RENATURATION RATES. BIOPOLYMERS 14:2517-2524.

(1559) WILHAM, C. A., R. J. DIMLER, AND F. R. SENTI. 1959. A NOTE ON THE EFFECTS OF NEUTRAL POLYSACCHARIDES ON DOUGH MIXING PROPERTIES. CEREAL CHEM. 36:558-563.

(1560) WOODSIDE, E. E., C. A. FRICK, AND W. KOCHOLATY. 1965. TRICHLOROACETIC ACID SOLUBLE POLYSACCHARIDE-PROTEIN COMPLEXES. PROC. SOC. EXP. BIOL. MED. 119:327-331.

(1561) ------, G. F. TROTT, R. J. DOYLE, AND C. W. FISHEL. 1966. POLYGLUCOSE-PROTEIN COMPLEXES. ARCH. BIOCHEM. BIOPHYS. 117:125-133.

SEE ALSO: 844 1279 1280 1288 1488 THROUGH 1492 1603 1604 1606 1977 2104 2176 THROUGH 2189

C. Formed Elements of Blood, and Thymus and Tumor Cells

(1562) ALEVY, Y. G., AND J. R. BATTISTO. 1976. CHARACTERIZATION OF DEXTRAN-ACTIVATED T-CELL FACTORS. IMMUNOLOGY 30(3):391-399.

(1563) ASHWOOD-SMITH, M. J., AND C. WARBY. 1971. STUDIES ON THE MOLECULAR WEIGHT AND CRYOPROTECTIVE PROPERTIES OF POLYVINYLPYRROLIDONE AND DEXTRAN WITH BACTERIA AND ERYTHROCYTES. CRYOBIOLOGY 8:453-464.

(1564) BENJAMIN, S. A., AND A. C. FERRIS. 1975. DEXTRAN PLANT MITOGENS. PROC. SOC. EXP. MED. 148:247-250. ALSO IN ANNU. REP. INHALATION TOXICOL. RES. INST. 1973. 203-205 AND IN CHEM. ABSTR. 1976. 84:119833X.

(1565) BERTCHER, R., L. M. MEYER, AND J. BELLAMY. 1952. EFFECT OF VARIOUS PLASMA VOLUME EXPANDERS ON ERYTHROCYTE SIZE. PROC. SOC. EXP. BIOL. MED. 80:508-509.

(1566) BLOOM, W. L. 1971. COATING ACTION OF DEXTRANS. IN J. R. DERRICK AND M. M. GUEST, EDS, DEXTRANS. CURRENT CONCEPTS OF BASIC ACTIONS AND CLINICAL APPLICATIONS, PP. 86-92. CHARLES C. THOMAS, PUBLISHER, SPRINGFIELD, ILLINOIS.

(1567) BUCKLEY, E. S., JR., AND J. G. GIBSON, II. 1950. SEPARATION OF THE FORMED ELEMENTS BY THE USE OF DEXTRAN. PROC. UNIV. LAB. PHYS. CHEM. RELATED MED. PUB. HEALTH 1:45-47. ALSO IN CHEM. ABSTR. 1952. 46:6176G.

(1568) ------, J. G. GIBSON, II., M. D. D'HONT, AND R. J. TINCH. 1950. REMOVAL OF PLASMA FROM ERYTHROCYTES SEDIMENTED WITH DEXTRAN BY "LONG TRAVERSE METHOD" CENTRIFUGATION. PROC. UNIV. LAB. PHYS. CHEM. RELATED MED. PUB. HEALTH 1:52-57. ALSO IN CHEM. ABSTR. 1952. 6177A.

(1569) CARBONE, J. V., F. W. FURTH, R. SCOTT, JR., AND W. H. CROSBY. 1954. A HEMOSTATIC DEFECT ASSOCIATED WITH DEXTRAN INFUSION. PROC. SOC. EXP. BIOL. MED. 85:101-103.

(1570) CASSELL, M., D. R. PHILLIPS, AND H. CHAPLIN, JR. 1962. TRANSFUSION OF BUFFY COAT-POOR RED CELL SUSPENSIONS PREPARED BY DEXTRAN SEDIMENTATION: DESCRIPTION OF NEWLY DESIGNED EQUIPMENT AND EVALUATION OF ITS USE. TRANSFUSION 2(4):216-220.

(1571) CASTANEDA, A. R., E. F. BERNSTEIN, AND R. L. VARCO. 1965. THE EFFECT OF POLY(VINYLPYRROLIDINONE), MANNITOL, DEXTROSE, AND OF VARIOUS DEXTRANS ON RED BLOOD CELL CHARGE. BIBL. ANAT. 7:262-266. ALSO IN CHEM. ABSTR. 1965. 18868C.

(1572) CHAPLIN, H., JR., T. E. BRITTINGHAM, AND M. CASSELL. 1959. METHODS FOR PREPARATION OF BUFFY COAT-POOR RED BLOOD CELLS FOR TRANSFUSION. AM. J. CLIN. PATHOL. 31:373-383.

(1573) CORLEY, R. D., AND N. R. JOSEPH. 1966. RED CELL CHARGE AS AFFECTED BY LOW VISCOSITY DEXTRAN. PROC. SOC. EXP. BIOL. MED. 122:1171-1173.

(1574) COUTINHO, A., G. MOELLER, AND W. RICHTER. 1974. MOLECULAR BASIS OF B CELL ACTIVATION. 1. MITOGENICITY OF NATIVE AND SUBSTITUTED DEXTRANS. SCAND. J. IMMUNOL. 3:321-338. ALSO IN CHEM. ABSTR. 1975. 82:2528V.

(1575) CROSBY, W. H., AND N. R. BENJAMIN. 1958. PAROXYSMAL NOCTURNAL HEMOGLOBINURIA: THE EFFECT OF DEXTRAN ON HEMOLYSIS IN VITRO. ACTA HAEMATOL. 19:193-198. ALSO IN CHEM. ABSTR. 1958. 52:18779E.

(1576) DASZYNSKI, J., AND B. DOKOWICZ-LUKASIAK. 1974. [EFFECT OF NONPENETRATING COMPOUNDS ON THE PROPERTIES OF RED BLOOD CELLS STORED AT LOW TEMPEARTURES] (IN POLISH). PROBL. TECH. MED. 5(3):231-237. ALSO IN CHEM. ABSTR. 1975. 83:6132E.

(1577) DHALL, D. P., D. R. HARPER, F. N. MCKENZIE, AND N. A. MATHESON. 1966. AGGREGATION OF HUMAN PLATELETS BY DEXTRANS. NATURE (LONDON) 210:745-746.

(1578) ------, W. A. J. BRYCE, AND N. A. MATHESON. 1967. OPTICAL CLEARING EFFECT OF DEXTRAN ON HUMAN PLATELET SUSPENSIONS. NATURE (LONDON) 216:719-721.

(1579) ELIASSON, R. 1969. INFLUENCE OF DEXTRAN ON HEMOSTASIS AND THROMBUS FORMATION. ACTA ACAD. REGIAE SCI. UPS. 12:77-90. ALSO IN CHEM. ABSTR. 1970. 72:30190R.

(1580) EVANS, R. J., AND J. L. GORDON. 1973. INHIBITION OF PLATELET THROMBUS FORMATION BY DEXTRAN. J. PATHOL. 109:1-2.

(1581) EWALD, R. A., J. W. EICHELBERGER, JR., A. A. YOUNG, AND OTHERS. 1965. THE EFFECT OF DEXTRAN ON PLATELET FACTOR 3 ACTIVITY: IN VITRO AND IN VIVO STUDIES. TRANSFUSION 5:109-119.

(1582) GARVIE, W. H. H., AND A. B. MATHESON. 1966. THE EFFECT OF INTRAVENOUS FLUIDS ON THE DEVELOPMENT OF EXPERIMENTAL TUMOR METASTASES: THEIR EFFECT ON TUMOR CELL AGGREGATION. BR. J. CANCER 20(4):838-846. ALSO IN CHEM. ABSTR. 1967. 66:103267J.

(1583) GELIN, L. E. 1969. RHEOLOGICAL ASPECTS ON SHOCK AND THE EXPERIMENTAL AND CLINICAL USE OF DEXTRANS. ACTA ACAD. REGIAE SCI. UPS. 12:43-76.

(1584) GOL'DMAN, I. L. 1959. [THE INFLUENCE OF POLYGLUCIN ON THE PHAGOCYTIC ACTIVITY OF LEUKOCYTES] (IN GERMAN). PATOL. FIZIOL. EKSP. TER. 3:72-73.

(1585) HARDWICKE, J., C. R. RICKETTS, AND J. R. SQUIRE. 1950. EFFECT OF DEXTRAN OF VARIOUS MOLECULAR SIZES ON ERYTHROCYTE SEDIMENTATION RATE. NATURE (LONDON) 166:988-989.

(1586) ------. 1951. USE OF DEXTRAN TO STUDY ERYTHROCYTE SEDIMENTATION. PROC. R. SOC. MED. 44:559-561.

(1587) ------ AND J. R. SQUIRE. 1952. THE BASIS OF THE ERYTHROCYTE SEDIMENTATION RATE. CLINICAL SCI. 11(4):333-355.

(1588) HUBBARD, D., AND G. L. LUCAS. 1960. IONIC CHARGES OF GLASS SURFACES AND OTHER MATERIALS, AND THEIR POSSIBLE ROLE IN THE COAGULATION OF BLOOD. J. APPL. PHYSIOL. 15:265-270.

(1589) IVANYI, L., AND T. LEHNER. 1974. STIMULATION OF HUMAN LYMPHOCYTES BY B-CELL MITOGENS. CLIN. EXP. IMMUNOL. 18:347-356. ALSO IN CHEM. ABSTR. 1975. 82:68832W.

(1590) JACOBAEUS, U. 1957. STUDIES ON THE EFFECT OF DEXTRAN ON THE COAGULATION OF BLOOD. ACTA MED. SCAND. 157(322):9-103. ALSO IN CHEM. ABSTR. 1957. 51:15768G.

(1591) KAWANO, T. 1958. PHYSIOLOGICAL EFFECTS OF DEXTRAN MANUFACTURED IN JAPAN. I. EFFECTS OF DEXTRAN ON THE PHYSIOLOGICAL FUNCTION OF ERYTHROCYTES. NIPPON NOGEI KAGAKU KAISHI 32:379-383. ALSO IN CHEM. ABSTR. 1959. 53:5502I.

(1592) ------. 1959. PHYSIOLOGICAL EFFECTS OF DEXTRAN MANUFACTURED IN JAPAN. II. EFFECTS OF DEXTRAN ON BLOOD VISCOSITY AND COAGULATION AND ITS TOXICITY AND ANTIGENICITY. NIPPON NOGEI KAGAKU KAISHI 32:537-541. ALSO IN CHEM. ABSTR. 1959. 53:5503A.

(1593) LACKO, L., AND M. BURGER. 1962. INTERACTION OF SOME DISACCHARIDES WITH CARRIER SYSTEM FOR ALDOSES IN ERYTHROCYTES. BIOCHEM. J. 83:622-625.

(1594) LANGDELL, R. D., E. ADELSON, F. W. FURTH, AND W. H. CROSBY. 1958. DEXTRAN AND PROLONGED BLEEDING TIME. RESULTS OF A SIXTY-GRAM, ONE-LITER INFUSION GIVEN TO ONE HUNDRED SIXTY-THREE NORMAL HUMAN SUBJECTS. J. AM. MED. ASSOC. 166:346-351.

(1595) ------. 1971. ADSORPTION OF RADIOACTIVE DEXTRAN ON RED CELLS. IN J. R. DERRICK AND M. M. GUEST, EDS. DEXTRANS. CURRENT CONCEPTS OF BASIC ACTIONS AND CLINICAL APPLICATIONS, PP. 130-136. CHARLES C. THOMAS, PUBLISHER, SPRINGFIELD, ILLINOIS.

(1596) LEUSEN, I. R., AND H. E. ESSEX. 1953. LEUKOPENIA AND CHANGES IN DIFFERENTIAL LEUCOCYTE COUNTS PRODUCED IN RABBITS BY DEXTRAN AND ACACIA. AM. J. PHYSIOL. 172:231-236.

(1597) MARSDEN, N. V. B., AND S. G. OESTLING. 1959. ACCUMULATION OF DEXTRAN IN HUMAN RED CELLS AFTER HAEMOLYSIS. NATURE (LONDON) 184:723-724.

(1598) MCCRAW, A., AND A. K. SIM. 1969. A TECHNIQUE FOR THE PREPARATION OF A "BUFFY LAYER" USING DEXTRAN 500. CLIN. CHIM. ACTA 25:286-287.

(1599) MINOR, A. H., AND L. BURNETT. 1952. A METHOD FOR SEPARATING AND CONCENTRATING PLATELETS FROM NORMAL HUMAN BLOOD. BLOOD J. HEMATOL. 7:693-699. ALSO IN BIOL. ABSTR. 1953. 27:781.

(1600) PICKUP, D. M. 1949. EXTRACTION OF LYMPHOCYTES FROM RABBITS' BLOOD. NATURE (LONDON) 164:959.

(1601) PIKE, B. G., AND D. HUBBARD. 1957. INCREASED CHEMICAL REACTIVITY OF THE SURFACE COMPARED WITH THAT IN THE BULK VOLUME OF BRITTON-ROBINSON UNIVERSAL BUFFERS. J. RES. NAT. BUR. STAND. 59:411-414.

(1602) PONDER, E. 1957. [COATING OF HUMAN PLATELETS AND ERYTHROCYTES BY DEXTRANS] (IN FRENCH). REV. HEMATOL. 12:11-15. ALSO IN CHEM. ABSTR. 1960. 54:13311I.

(1603) ------ AND R. V. PONDER. 1961. AGE AND MOLECULAR WEIGHT OF DEXTRANS, THEIR COATING EFFECTS, AND THEIR INTERACTION WITH SERUM ALBUMIN. NATURE (LONDON) 190:277-278.

(1604) RAMPLING, M. W., AND J. A. SIRS. 1972. THE INTERACTIONS OF FIBRINOGEN AND DEXTRANS WITH ERYTHROCYTES. J. PHYSIOL. (LONDON) 223:199-212.

(1605) RICHTER, W. 1965. LOWEST MOLECULAR WEIGHT OF DEXTRAN FRACTIONS WITH AGGREGATING EFFECT ON HUMAN ERTHROCYTES. ACTA CHIR. SCAND. 129:457-461.

(1606) RONQUIST, G. 1969. ENZYME ACTIVITIES AT THE SURFACE OF INTACT HUMAN ERYTHROCYTES. ACTA PHYSIOL. SCAND. 76:312-320.

(1607) ROTHMAN, S., E. ADELSON, A. SCHWEBEL, AND OTHERS. 1957. ADSORPTION OF CARBON-14 DEXTRAN TO HUMAN BLOOD PLATELETS AND RED BLOOD CELLS IN VITRO. VOX SANG. 2:104-109. ALSO IN CHEM. ABSTR. 1957. 51:12169I.

(1608) RUTTINGER, L., B. SWEDIN, AND B. ABERG. 1952. THE EFFECT OF DEXTRAN ON THE ERYTHROCYTE SEDIMENTATION RATE IN MAN. SCAND. J. CLIN. LAB. INVEST. 4:359-362. ALSO IN CHEM. ABSTR. 1953. 47:3471D.

(1609) SKOOG, W. A., AND W. S. BECK. 1956. STUDIES ON THE FIBRINOGEN, DEXTRAN AND PHYTOHEMAGGLUTININ METHODS OF ISOLATING LEUKOCYTES. BLOOD J. HEMATOL. 436-454.

(1610) THORSEN, H. G. R., AND H. C. HINT. 1950. AGGREGATION, SEDIMENTATION AND INTRAVASCULAR SLUDGING OF ERYTHROCYTES. INTERRELATION BETWEEN SUSPENSION STABILITY AND COLLOIDS IN SUSPENSION FLUID. ACTA CHIR. SCAND. SUPPL. 154:1-50.

(1611) ------ AND W. RICHTER. 1959. THE EFFECT OF HEMATOCRIT, TEMPERATURE, AND MOLECULAR STRUCTURE ON ERYTHROCYTE SEDIMENTATION RATE IN MODEL EXPERIMENTS. ACTA MED. SCAND. 165:173-179. ALSO IN CHEM. ABSTR. 1960. 54:4687E.

(1612) WILDY, P., AND M. RIDLEY. 1959. SEPARATION OF HUMAN LEUCOCYTES FROM BLOOD. NATURE (LONDON) 182:1801-1803.

(1613) WUNDERLY, C. 1957. QUANTITATIVE EVALUATION OF HAEMAGGLUTINATION BY MEANS OF A DENSITY COLUMN. NATURE (LONDON) 179:1132-1133.

SEE ALSO: 915 933 945 953 THROUGH 956
1025 1085 1086 1090 THROUGH 1092 1548 2503

XVIII. Structurally related interaction of dextrans with concanavalin A and other lectins

(1614) AGRAWAL, B. B. L., AND I. J. GOLDSTEIN. 1965. SPECIFIC BINDING OF CONCANAVALIN A TO CROSS-LINKED DEXTRAN GELS. BIOCHEM. J. 96:23C-25C.

(1615) ------ AND I. J. GOLDSTEIN. 1967. PHYSICAL AND CHEMICAL CHARACTERIZATION OF CONCANAVALIN A, THE HEMAGGLUTININ FROM JACK BEAN (CANAVALIA ENSIFORMIS). BIOCHIM. BIOPHYS. ACTA 133:376-379.

(1616) ------ AND I. J. GOLDSTEIN. 1967. PROTEIN-CARBOHYDRATE INTERACTION. VI. ISOLATION OF CONCANAVALIN A BY SPECIFIC ABSORPTION ON CROSS-LINKED DEXTRAN GELS. BIOCHIM. BIOPHYS. ACTA 147:262-271.

(1617) ------ AND I. J. GOLDSTEIN. 1968. PROTEIN-CARBOHYDRATE INTERACTION. VII. PHYSICAL AND CHEMICAL STUDIES ON CONCANAVALIN A, THE HEMAGGLUTININ OF THE JACK BEAN. ARCH. BIOCHEM. BIOPHYS. 124(1-3):218-229.

(1618) ------ AND I. J. GOLDSTEIN. 1968. PROTEIN-CARBOHYDRATE INTERACTION. XV. THE ROLE OF BIVALENT CATIONS IN CONCANAVALIN A-POLYSACCHARIDE INTERACTION. CAN. J. BIOCHEM. 46:1147-1150.

(1619) ------, I. J. GOLDSTEIN, G. S. HASSING, AND L. L. SO. 1968. PROTEIN-CARBOHYDRATE INTERACTION. XVIII. THE PREPARATION AND PROPERTIES OF ACETYLATED CONCANAVALIN A, THE HEMAGGLUTIN OF THE JACK BEAN. BIOCHEMISTRY 7:4211-4218.

(1620) ------ AND I. J. GOLDSTEIN. 1972. CONCANAVALIN A, THE JACK BEAN (CANAVALIA ENSIFORMIS) PHYTOHEMAGGLUTININ. (PURIFICATION; DETAILS OF ASSAY USING A DEXTRAN.) METHODS ENZYMOL. 28B:313-318.

(1621) BARKER, S. A., A. G. GIBLIN, C. J. GRAY, AND W. H. BOWEN. 1974. PREPARATION AND PROPERTIES OF A CONJUGATE CONTAINING DEXTRANASE AND CONCANAVALIN A. CARBOHYDR. RES. 36:23-33.

(1622) CIFONELLI, J. A., B. A. LEWIS, R. MONTGOMERY, AND F. SMITH. 1956. REACTION BETWEEN POLYSACCHARIDES AND CONCANAVALIN A [ABSTRACT 6]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 129:3D.

(1623) ------, R. MONTGOMERY, AND F. SMITH. 1956. THE REACTION BETWEEN CONCANAVALIN A AND GLYCOGEN. J. AM. CHEM. SOC. 78:2485-2489.

(1624) ------ AND F. SMITH. 1957. THE INTERACTION OF BACTERIAL POLYGLUCOSANS WITH CONCANAVALIN A. J. AM. CHEM. SOC. 79:5055-5057.

(1625) DONNELLY, E. H., AND I. J. GOLDSTEIN. 1970. GLUTARALDEHYDE-INSOLUBILIZED CONCANAVALIN A: AN ABSORBENT FOR THE SPECIFIC ISOLATION OF POLYSACCHARIDES AND GLYCOPROTEINS. BIOCHEM. J. 118:679-680.

(1626) DOYLE, R. J., E. E. WOODSIDE, AND C. W. FISHEL. 1968. PROTEIN-POLYELECTROLYTE INTERACTIONS: THE CONCANAVALIN A PRECIPITIN REACTION WITH POLYELECTROLYTES AND POLYSACCHARIDE DERIVATIVES. BIOCHEM. J. 106:35-40.

(1627) ------ AND L. CRONHOLM. 1969. A MODEL ANTIGEN-ANTIBODY SYSTEM FOR CLASSROOM USE. J. CHEM. EDUC. 46:868-869.

(1628) ------. 1970. CARBOHYDRATE-CONCANAVALIN A INTERACTIONS. STAERKE 22:317-319.

(1629) ERLANDER, S. R. 1969. EXPLANATION OF IONIC SEQUENCES IN VARIOUS PHENOMENA. IX. INTERACTION OF PROTEINS AND CARBOHYDRATES: CONCANAVALIN A AND GLUCANS. STAERKE 21:256-261.

(1630) ------. 1970. THE COMPLEXING OF CONCANAVALIN A AND GLUCANS. STAERKE 22:319-321.

(1631) GOLDSTEIN, I. J., C. E. HOLLERMAN, AND J. M. MERRICK. 1965. PROTEIN-CARBOHYDRATE INTERACTION. I. THE INTERACTION OF POLYSACCHARIDES WITH CONCANAVALIN A. BIOCHIM. BIOPHYS. ACTA 97:68-76.

(1632) ------, C. E. HOLLERMAN, AND E. E. SMITH. 1965. PROTEIN-CARBOHYDRATE INTERACTION. II. INHIBITION STUDIES ON THE INTERACTION OF CONCANAVALIN A WITH POLYSACCHARIDES. BIOCHEMISTRY 4:876-883.

(1633) ------ AND L. L. SO. 1965. PROTEIN-CARBOHYDRATE INTERACTION. III. AGAR GEL-DIFFUSION STUDIES ON THE INTERACTION OF CONCANAVALIN A, A LECTIN ISOLATED FROM JACK BEAN, WITH POLYSACCHARIDES. ARCH. BIOCHEM. BIOPHYS. 111:407-414.

(1634) ------ AND R. N. IYER. 1966. INTERACTION OF CONCANAVALIN A, A PHYTOHEMAGGLUTININ, WITH MODEL SUBSTANCES. BIOCHIM. BIOPHYS. ACTA 121:197-200.

(1635) ------, R. N. IYER, E. E. SMITH, AND L. L. SO. 1967. PROTEIN-CARBOHYDRATE INTERACTION. X. THE INTERACTION OF CONCANAVALIN A WITH SOPHOROSE AND SOME OF ITS DERIVATIVES. BIOCHEMISTRY 6:2373-2377.

(1636) ------, R. D. PORETZ, L. L. SO, AND Y. YANG. 1968. PROTEIN-CARBOHYDRATE INTERACTION. XVI. THE INTERACTION OF CONCANAVALIN A WITH DEXTRANS FROM L. MESENTEROIDES B-512(F), L. MESENTEROIDES (BIRMINGHAM), STREPTOCOCCUS BOVIS, AND A SYNTHETIC ALPHA-(1,6)-D-GLUCAN. ARCH. BIOCHEM. BIOPHYS. 127:787-794.

(1637) ------. 1972. USE OF CONCANAVALIN A FOR STRUCTURAL STUDIES. METHODS CARBOHYDR. CHEM. 6:106-119.

(1638) ------, C. M. REICHERT, A. MISAKI, AND P. A. J. GORIN. 1973. AN EXTENSION OF THE CARBOHYDRATE BINDING SPECIFICITY OF CONCANAVALIN A. BIOCHIM. BIOPHYS. ACTA 317:500-504.

(1639) ------, C. M. REICHERT, AND A. MISAKI. 1974. INTERACTION OF CONCANAVALIN A WITH MODEL SUBSTRATES. (A REVIEW.) N.Y. ACAD. SCI. 234:283-296. ALSO IN CHEM. ABSTR. 1974. 81:149935P.

(1640) HASSING, G. S., AND I. J. GOLDSTEIN. 1970. ULTRAVIOLET DIFFERENCE SPECTRAL STUDIES ON CONCANAVALIN A CARBOHYDRATE REACTION. EUR. J. BIOCHEM. 16:549-556.

(1641) ------, I. J. GOLDSTEIN, AND M. MARINI. 1971. THE ROLE OF PROTEIN CARBOXYL GROUPS IN CARBOHYDRATE-CONCANAVALIN A INTERACTION. BIOCHIM. BIOPHYS. ACTA 243:90-97.

(1642) HEHRE, E. J. 1965. [STRUCTURE RESPONSIBLE FOR CONCANAVALIN A--POLYSACCHARIDE INTERACTION] (IN JAPANESE). KAGAKU NO RYOIKI 9:454.

(1643) IYER, R. N., AND I. J. GOLDSTEIN. 1973. QUANTITATIVE STUDIES ON THE INTERACTION OF CONCANAVALIN A, THE CARBOHYDRATE-BINDING PROTEIN OF THE JACK BEAN, WITH MODEL CARBOHYDRATE-PROTEIN CONJUGATES. IMMUNOCHEMISTRY 10:313-322. ALSO IN CHEM. ABSTR. 1973. 79:39405S.

(1644) KARLSTAM, B. 1973. EVIDENCE OF THE REQUIREMENT OF A FULL COMPLEMENT OF MANGANESE AND CALCIUM IONS FOR OPTIMAL BINDING OF CARBOHYDRATES TO ELECTROPHORETICALLY HOMOGENEOUS CONCANAVALIN A. BIOCHIM. BIOPHYS. ACTA 329:295-304.

(1645) KENNEDY, J. F., AND A. ROSEVEAR. 1973. AN ASSESSMENT OF THE FRACTIONATION OF CARBOHYDRATES ON CONCANAVALIN A--SEPHAROSE 4B BY AFFINITY CHROMATOGRAPHY. J. CHEM. SOC. PERKIN TRANS. 1, 19:2041-2046.

(1646) KOBAYASHI, M., K. SHISHIDO, T. KIKUCHI, AND K. MATSUDA. 1973. THE STRUCTURE OF DEXTRAN ELABORATED BY LEUCONOSTOC MESENTEROIDES NRRL B-1299. PART I. FRACTIONATION OF THE LEUCONOSTOC MESENTEROIDES NRRL B-1299 DEXTRAN AND PRELIMINARY CHARACTERIZATION OF THE FRACTIONS. AGRIC. BIOL. CHEM. 37:357-365.

(1647) LLOYD, K. O. 1970. THE PREPARATION OF TWO INSOLUBLE FORMS OF THE PHYTOHEMAGGLUTININ, CONCANAVALIN A, AND THEIR INTERACTIONS WITH POLYSACCHARIDES AND GLYCOPROTEINS. ARCH. BIOCHEM. BIOPHYS. 137:460-468.

(1648) MARTINEAU, R. S., P. Z. ALLEN, I. J. GOLDSTEIN, AND R. N. IYER. 1971. IMMUNOCHEMICAL STUDIES ON A PANOSYL-AZOPROTEIN CONJUGATE. IMMUNOCHEMISTRY 8:705-718.

(1649) OLSON, M. O. J., AND I. E. LIENER. 1967. SOME PHYSICAL AND CHEMICAL PROPERTIES OF CONCANAVALIN A, THE PHYTOHEMAGGLUTININ OF THE JACK BEAN. BIOCHEMISTRY 6:105-111.

(1650) ------ AND I. E. LIENER. 1967. THE ASSOCIATION AND DISSOCIATION OF CONCANAVALIN A, THE PHYTOHEMAGGLUTININ OF THE JACK BEAN. BIOCHEMISTRY 6:3801-3808.

(1651) PERERA, C. B., AND A. M. FRUMIN. 1966. HEMAGGLUTINATION BY FAVA BEAN EXTRACT INHIBITED BY SIMPLE SUGARS. SCIENCE 151:821. ALSO IN CHEM. ABSTR. 1966. 64:14768E.

(1652) PORETZ, R. D., AND I. J. GOLDSTEIN. 1968. PROTEIN-CARBOHYDRATE INTERACTION. XI. A STUDY OF TURBIDITY AS IT RELATES TO CONCANAVALIN A--GLYCAN INTERACTION. IMMUNOLOGY 14:165-174.

(1653) ------ AND I. J. GOLDSTEIN. 1970. AN EXAMINATION OF THE TOPOGRAPHY OF THE SACCHARIDE BINDING SITES OF CONCANAVALIN A AND OF THE FORCES INVOLVED IN COMPLEXATION. BIOCHEMISTRY 9:2890-2896.

(1654) PREOBRAZHENSKAYA, M. E., AND E. L. ROSENFEL'D. 1968. [REACTIONS OF NATIVE DEXTRANS OF DIFFERENT STRUCTURES WITH CONCANAVALIN A] (IN RUSSIAN). BIOKHIMIYA 33(4):784-791. ALSO IN BIOCHEMISTRY ENGL. TRANS. 33(4):641-647.

(1655) ------. 1973. [SPLITTING OF NATIVE DEXTRANS BY PIG SPLEEN ACID ALPHA-GLUCOSIDASE IN PRESENCE OF CONCANAVALIN A] (IN RUSSIAN). BIOKHIMIYA 38(4):763-770. ALSO IN BIOCHEMISTRY ENGL. TRANS. 38(4):637-643.

(1656) ------ AND N. A. DANILOVA. 1974. [ISOLATION AND PROPERTIES OF DEXTRANS PRODUCED BY NEW STRAINS OF LEUCONOSTOC] (IN RUSSIAN). PRIKL. BIOKHIM. MIKROBIOL. 10(4):539-547. ALSO IN MICROBIOL. ABSTR. (1975) SEC. B, 10(3):10B2105.

(1657) SMITH, E. E., AND I. J. GOLDSTEIN. 1967. PROTEIN-CARBOHYDRATE INTERACTION. V. FURTHER INHIBITION STUDIES TOWARD DEFINING THE STEREOCHEMICAL REQUIREMENTS OF THE REACTIVE SITES OF CONCANAVALIN A. ARCH. BIOCHEM. BIOPHYS. 121:88-95.

(1658) ------, Z. H. GUNYA SMITH, AND I. J. GOLDSTEIN. 1968. PROTEIN-CARBOHYDRATE INTERACTION. XII. A TURBIDIMETRIC STUDY OF THE INTERACTION OF CONCANAVALIN A WITH AMYLOPECTIN AND GLYCOGEN AND SOME OF THEIR ENZYMIC AND CHEMICAL DEGRADATION PRODUCTS. BIOCHEM. J. 107:715-724.

(1659) SO, L. L., AND I. J. GOLDSTEIN. 1967. PROTEIN-CARBOHYDRATE INTERACTION. IV. APPLICATION OF THE QUANTITATIVE PRECIPITIN METHOD TO POLYSACCHARIDE-CONCANAVALIN A INTERACTION. J. BIOL. CHEM. 242:1617-1622.

(1660) ------ AND I. J. GOLDSTEIN. 1967. PROTEIN-CARBOHYDRATE INTERACTION. IX. APPLICATION OF THE QUANTITATIVE HAPTEN INHIBITION TECHNIQUE TO POLYSACCHARIDE-CONCANAVLIN A INTERACTION. SOME COMMENTS ON THE FORCES INVOLVED IN CONCANAVALIN A-POLYSACCHARIDE INTERACTION. J. IMMUNOL. 99:158-163.

(1661) ------ AND I. J. GOLDSTEIN. 1968. PROTEIN-CARBOHYDRATE INTERACTION. XIII. THE INTERACTION OF CONCANAVALIN A WITH ALPHA-MANNANS FROM A VARIETY OF MICROORGANISMS. J. BIOL. CHEM. 243:2003-2007.

(1662) ------ AND I. J. GOLDSTEIN. 1968. PROTEIN-CARBOHYDRATE INTERACTION. XX. ON THE NUMBER OF COMBINING SITES ON CONCANAVALIN A, THE PHYTOHEMAGGLUTININ OF THE JACK BEAN. BIOCHIM. BIOPHYS. ACTA 165:398-404.

(1663) ------ AND I. J. GOLDSTEIN. 1969. PROTEIN-CARBOHYDRATE INTERACTION. XVII. THE EFFECT OF POLYSACCHARIDE MOLECULAR WEIGHT ON THE CONCANAVALIN A-POLYSACCHARIDE PRECIPITATION REACTION. J. IMMUNOL. 102:53-57.

(1664) ------, AND I. J. GOLDSTEIN. 1969. PROTEIN-CARBOHYDRATE INTERACTION. PART XXI. THE INTERACTION OF CONCANAVALIN A WITH D-FRUCTANS. CARBOHYDR. RES. 10:231-244.

(1665) YOUNG, N. M., M. A. LEON, T. TAKAHASHI, AND OTHERS. 1971. STUDIES ON A PHYTOHEMAGGLUTININ FROM THE LENTIL. III. REACTION OF LENS CULINARIS HEMAGGLUTININ WITH POLYSACCHARIDES, GLYCOPROTEINS, AND LYMPHOCYTES. J. BIOL. CHEM. 246:1596-1601.

SEE ALSO: 350 750 1564 1667 1753 1822 2010 2514

XIX. Immunology and related topics

A. Immunological Characteristics and Factors that Influence Activity

Heptenic, antigenic, anaphylactogenic, and tolerogenic characteristics of native dextrans, fractions of partially hydrolyzed dextrans, and isomaltooligosaccharides.

(1666) BATTISTO, J. R., G. CHIAPPETTA, AND R. HIXON. 1968. IMMUNOLOGIC RESPONSES OF GUINEA PIGS TO DEXTRAN. J. IMMUNOL. 101:203-209.

(1667) CHEN, J. C., AND M. A. LEON. 1976. THE IMMUNE RESPONSE TO DEXTRAN IN BALB/C MICE. I. MODIFICATION OF "THYMUS-INDEPENDENT" RESPONSE BY THE T CELL MITOGEN CONCANAVALIN A. J. IMMUNOL. 116:416-422.

(1668) CHIAPPETTA, G., J. R. BATTISTO, AND R. ROWEN. 1967. IMMUNOGENICITY OF DEXTRAN IN GUINEA PIGS [ABSTRACT M 124]. BACTERIOL. PROC. 81.

(1669) COULSON, E. J., AND H. STEVENS. 1961. SOME OBSERVATIONS ON THE IMMUNOCHEMISTRY OF DEXTRANS. J. IMMUNOL. 86:241-252.

(1670) ------ AND H. STEVENS. 1961. COMPARATIVE EFFICACY OF INTRAVENOUS AND INTRAPERITONEAL ADMINISTRATION OF ANTISERUM IN PASSIVE ANAPHYLAXIS. PROC. SOC. EXP. BIOL. MED. 106:40-42.

(1671) DESAYMARD, C., AND J. G. HOWARD. 1975. ROLE OF EPITOPE DENSITY IN THE INDUCTION OF IMMUNITY AND TOLERANCE WITH HAPTENATED T INDEPENDENT ANTIGENS. II. STUDIES IN VIVO. EUR. J. IMMUNOL.

(1672) EVANS, T. H., W. L. HAWKINS, AND H. HIBBERT. 1941. STUDIES ON REACTIONS RELATING TO CARBOHYDRATES AND POLYSACCHARIDES. LXIV. ANTIGENICITY OF DEXTRAN PRODUCED BY LEUCONOSTOC MESENTEROIDES. J. EXP. MED. 74:511-518.

(1673) FELDMANN, M., J. G. HOWARD, AND C. DESAYMARD. 1975. ROLE OF ANTIGEN STRUCTURE IN THE DISCRIMINATION BETWEEN TOLERANCE AND IMMUNITY BY B CELLS. TRANSPLANT REV.

(1674) FITZGERALD, J. G. 1933. THE NATURE OF ANTIGENS. (A REVIEW.) R. SOC. CAN. SEC. 5, 27:1-9. ALSO IN CHEM. ABSTR. 1934. 28:1762.

(1675) GLYNN, L. E., E. J. HOLBOROW, AND G. D. JOHNSON. 1954. THE RELATIONSHIP OF POLYMER SIZE AND SULPHATION TO THE HAPTENIC SPECIFICITY OF DEXTRANS. J. PATHOL. BACTERIOL. 68:205-220. ALSO IN CHEM. ABSTR. 1955. 49:4892A.

(1676) HAEMMERLING, U., AND O. WESTPHAL. 1967. SYNTHESIS AND USE OF O-STEAROYL POLYSACCHARIDES IN PASSIVE HEMAGGLUTINATION AND HEMOLYSIS. EUR. J. BIOCHEM. 1:46-50.

(1677) HEHRE, E. J. 1941. PRODUCTION FROM SUCROSE OF A SEROLOGICALLY REACTIVE POLYSACCHARIDE BY A STERILE BACTERIAL EXTRACT. SCIENCE 93:237-238.

(1678) ------. 1943. SEROLOGICAL PROPERTIES OF PRODUCTS SYNTHESIZED FROM SUCROSE BY ENZYMES FROM DIFFERENT STRAINS OF LEUCONOSTOC BACTERIA. PROC. SOC. EXP. BIOL. MED. 54:18-19.

(1679) ------, J. Y. SUGG, AND J. M. NEILL. 1952. THE SEROLOGICAL ACTIVITY OF DEXTRANS. ANN. N.Y. ACAD. SCI. 55(3):467-470.

(1680) HIJMANS, W., S. C. MILAZZO, AND E. J. HOLBOROW. 1957. FAILURE TO INCREASE PRODUCTION OF ANTIBODY AGAINST DEXTRAN AND ALGINATE ABSORBED ON STREPTOCOCCI BY CHANGING THE STREPTOCOCCAL TYPE DURING IMMUNIZATION. J. PATHOL. BACTERIOL. 73:268-269. ALSO IN CHEM. ABSTR. 1957. 51:9887D.

(1681) HIMMELSPACH, K., O. WESTPHAL, AND B. TEICHMANN. 1971. USE OF 1-(META-AMINOPHENYL) FLAVAZOLES FOR THE PREPARATION OF IMMUNOGENS WITH OLIGOSACCHARIDE DETERMINANT GROUPS. EUR. J. IMMUNOL. 1:106-112. ALSO IN CHEM. ABSTR. 1971. 75:61385Z.

(1682) HOWARD, J. G., B. M. COURTENAY, AND C. DESAYMARD. 1974. EQUIVALENT RESPONSIVENESS TO BRANCHED POLYSACCHARIDES AND THEIR DINITROPHENYL CONJUGATES IN THE BIOZZI HIGH AND LOW RESPONDER LINES OF MICE. EUR. J. IMMUNOL. 4:453-457.

(1683) ------, G. VICARI, AND B. M. COURTENAY. 1975. INFLUENCE OF MOLECULAR STRUCTURE ON THE TOLEROGENICITY OF BACTERIAL DEXTRANS. I. THE ALPHA-1-6 LINKED EPITOPE OF DEXTRAN B-512. IMMUNOLOGY 29:585-597.

(1684) ------ AND B. M. COURTENAY. 1975. INFLUENCE OF MOLECULAR STRUCTURE ON THE TOLEROGENICITY OF BACTERIAL DEXTRANS. 2. THE ALPHA-1-3 LINKED EPITOPE OF DEXTRAN B-1355. IMMUNOLOGY 29:599-610.

(1685) ------, B. M. COURTENAY, AND G. VICARI. 1975. INFLUENCE OF MOLECULAR STRUCTURE ON THE TOLEROGENICITY OF BACTERIAL DEXTRANS. 3. DISSOCIATION BETWEEN TOLERANCE AND IMMUNITY TO THE ALPHA-1-6 AND ALPHA-1-3 LINKED EPITOPES OF DEXTRAN B-1355. IMMUNOLOGY 29:611-619.

(1686) KABAT, E. A., AND D. BERG. 1952. PRODUCTION OF PRECIPITINS AND CUTANEOUS SENSITIVITY IN MAN BY INJECTION OF SMALL AMOUNTS OF DEXTRAN. ANN. N. Y. ACAD. SCI. 55(3):471-476.

(1687) KJELLMAN, H. 1965. RELATIONSHIP OF MOLECULAR WEIGHT AND BIOLOGICAL EFFECT OF DEXTRAN. FARM. REVY 64:85-97. ALSO IN CHEM. ABSTR. 1965. 62:15989E.

(1688) ------. 1965. THE BIOLOGICAL EFFECTS OF DEXTRAN AND THEIR DEPENDENCE ON MOLECULAR WEIGHT. (A REVIEW.) REV. INT. SERV. SANTE ARMEES TERRE MER AIR 38(1):7-15. ALSO IN CHEM. ABSTR. 1965. 62:14945G.

(1689) MAURER, P. H., AND H. C. MANSMANN, JR. 1958. ON NONANTIGENICITY OF POLYSACCHARIDES IN GUINEA PIGS. PROC. SOC. EXP. BIOL. MED. 99:378-381.

(1690) NEILL, J. M., J. Y. SUGG, E. J. HEHRE, AND E. JAFFE. 1941. INFLUENCE OF SUCROSE ON PRODUCTION OF SEROLOGICALLY REACTIVE MATERIAL BY CERTAIN STREPTOCOCCI. PROC. SOC. EXP. BIOL. MED. 47:339-344.

(1691) RICHTER, W. 1970. ABSENCE OF IMMUNOGENIC IMPURITIES IN CLINICAL DEXTRAN TESTED BY PASSIVE CUTANEOUS ANAPHYLAXIS. INT. ARCH. ALLERGY APPL. IMMUNOL. 39:469-478.

(1692) ------. 1971. HAPTEN INHIBITION OF PASSIVE ANTIDEXTRAN DEXTRAN ANAPHYLAXIS IN GUINEA PIGS. ROLE OF MOLECULAR SIZE IN ANAPHYLACTOGENICITY AND PRECIPITABILITY OF DEXTRAN FRACTIONS. INT. ARCH. ALLERGY APPL. IMMUNOL. 41:826-844.

(1693) ------. 1972. MINIMAL MOLECULAR SIZE OF DEXTRAN REQUIRED TO ELICIT HETEROLOGOUS PASSIVE CUTANEOUS ANAPHYLAXIS IN GUINEA PIGS. INT. ARCH. ALLERGY APPL. IMMUNOL. 43:252-268. ALSO IN CHEM. ABSTR. 1972. 77:112403E.

(1694) ------ AND L. KAGEDAL. 1972. PREPARATION OF DEXTRAN-PROTEIN CONJUGATES AND STUDIES OF THEIR IMMUNOGENICITY. INT. ARCH. ALLERGY APPL. IMMUNOL. 42:887-904. ALSO IN CHEM. ABST. 1972. 77:46603S.

(1695) ------. 1973. BUILT-IN HAPTEN INHIBITION OF ANAPHYLAXIS BY THE LOW MOLECULAR WEIGHT SUBFRACTIONS OF A B-512 DEXTRAN FRACTION OF MW 3,400. INT. ARCH. ALLERGY APPL. IMMUNOL. 45:930-936. ALSO IN CHEM. ABSTR. 1974. 80:25756R.

(1696) ------. 1974. CROSS-REACTIVITY OF SYNTHETIC LINEAR DEXTRAN WITH ANTI-B512 DEXTRAN. VIEWPOINTS ON THE NATURE OF THE ANTIGENIC DETERMINANTS OF DEXTRAN. INT. ARCH. ALLERGY APPL. IMMUNOL. 46:438-447.

(1697) ------. 1975. EFFECT OF SUBSTIUTION ON REACTIVITY OF B512 DEXTRAN FRACTIONS WITH ANTI-B512 DEXTRAN IN HETEROLOGOUS PASSIVE CUTANEOUS ANAPHYLAXIS. INT. ARCH. ALLERGY APPL. IMMUNOL. 48:505-512. ALSO IN CHEM. ABSTR. 1975. 83:6969H.

(1698) SCHNEIDER, C. H., J. MICHL, AND A. L. DEWECK. 1971. [ANTIGENICITY OF HAPTEN-POLYSACCHARIDE CONJUGATES] (IN GERMAN). EUR. J. IMMUNOL. 1:98-106. ALSO IN CHEM. ABSTR. 1971. 75:149980A.

(1699) SWINEFORD, O., JR., S. QUELCH, AND D. SAMSELL. 1960. DOMINANT AND RECESSIVE PRECIPITATING AND DENSENSITIZING HAPTENS. ANN. ALLERGY 18:276-280. ALSO IN CHEM. ABSTR. 1963. 59:6845F.

(1700) ZOZAYA, J. 1932. CARBOHYDRATES ADSORBED ON COLLOIDS AS ANTIGENS. J. EXP. MED. 55:325-351.

SEE ALSO: 1470 1516 1518 THROUGH 1522 1779 2499

B. Antigenicity to Dextrans in Man

Natural occurrence in blood sera of components reactive with dextrans; clinical observations after parenteral administration of clinical sized dextrans.

(1701) BRYAN, G. C., AND J. SCUDDER. 1952. DEXTRAN AND PNEUMOCOCCUS CROSS-REACTIVITY IN SKIN TESTS AND SERUM PRECIPITIN TEXTS. N.Y. ACAD. SCI. ANN. 55(3):477-478.

(1702) FROMM, A. A., A. GROENWALL, G. WALLENIUS, AND B. ZOAR. 1961. [ANTIGEN NATURE OF DEXTRAN-PRECIPITATING PROTEINS FORMING SPONTANEOUSLY IN NORMAL HUMAN SERUM] (IN RUSSIAN). PROBL. GEMATOL. PRELIV. KROIV. 6(8):45-47. ALSO IN PROBL. GEMATOL. ENGL. TRANS. 6:553-556 AND CHEM. ABSTR. 1962. 56:10767I.

(1703) GRABAR, P., AND J. COGNET. 1955.. REACTIONS OF DIFFERENT NORMAL SERUMS WITH SOME MACROMOLECULAR SUBSTANCES, NATURAL OR SYNTHETIC. ANN. INST. PASTEUR 88:11-23. ALSO IN CHEM. ABSTR. 49:7086F.

(1704) GROENWALL, A. 1957. DEXTRAN AND ITS USE IN COLLOIDAL INFUSION SOLUTIONS. (SEE CHAPTER 6, PP. 91-98 AND CHAPTER 8, PP. 115-149.) ACADEMIC PRESS INC., NEW YORK.

(1705) ------. 1959. ANTIGENICITY OF SWEDISH CLINICAL DEXTRAN (MACRODEX). ACTA SOC. MED. UPS. 64:244-246. ALSO IN CHEM. ABSTR. 1960. 54:6928A.

(1706) HEHRE, E. J., AND J. Y. SUGG. 1950. SEROLOGICAL REACTIVITY OF DEXTRAN PLASMA SUBSTITUTES [AN ABSTRACT]. FED. PROC. 9(1):383.

(1707) ------. 1954. DEXTRAN. LANCET 266:104.

(1708) HEISTO, H., AND I. LUND. 1953. STUDIES ON ALLERGIC REACTIONS FOLLOWING ADMINISTRATION OF DEXTRAN (I). J. OSLO CITY HOSP. 3:159-170.

(1709) JACOBSSON, L., AND J. ZSIGA. 1958. DEXTRAN-REACTING ANTIBODIES IN HUMAN SERUM. ACTA SOC. MED. UPS. 63:165-179. ALSO IN CHEM. ABSTR. 1959. 53:11594D.

(1710) ------ AND R. WIKSTROEM. 1958. THE DETECTION OF DEXTRAN-REACTING ANTIBODIES IN HUMAN SERUM. ACTA MED. SOC. UPS. 63:180-187. ALSO IN CHEM. ABSTR. 1959. 53:11594G.

(1711) ------. 1958. INTRAVENOUS INFUSION OF CLINICAL B-512 IN NORMAL HUMAN SUBJECTS WITH DEXTRAN-REACTING ANTIBODIES IN SERUM. ACTA SOC. MED. UPS. 63:196-203. ALSO IN CHEM. ABSTR. 1959. 53:11595A.

(1712) ------ AND R. WIKSTROEM. 1963. THE PRECIPITIN REACTION BETWEEN NATURALLY OCCURRING HUMAN DEXTRAN-REACTING ANTIBODIES AND 51-CR TAGGED DEXTRAN. SCAND. J. CLIN. LAB. INVEST. SUPPL. 69, 15:114-120.

(1713) KLEMENCIC, F., AND B. SJOESTROEM. 1953. [EFFECT OF DEXTRAN-(MACRODEX) INFUSION ON ANTIBODY FORMATION IN THE RABBIT] (IN GERMAN). ACTA SOC. MED UPS. 59(1-2):12-16.

(1714) TARROW, A. B., AND E. J. PULASKI. 1953. REACTIONS IN MAN FROM INFUSION WITH DEXTRAN. ANESTHESIOLOGY 14:359-366.

(1715) WARREN, J., J. C. FEDER, AND J. F. KENT. 1952. SEROLOGICAL REACTIONS OF HUMAN SERA AND RABBIT SERA WITH CLINICAL DEXTRANS AND LEUCONOSTOC MESENTEROIDES [ABSTRACT M43]. BACTERIOL. PROC. 92.

(1716) WILKINSON, A. W. 1956. DEXTRAN WITHOUT REACTIONS. LANCET 271:604-606.

SEE ALSO: 1679 1729 1769

C. Serological Studies on Dextrans

Cross-reaction with antipneumoccal and other specific antisera and the structural bases for the interactions.

(1717) BUTLER, K., AND M. STACEY. 1955. IMMUNO-POLYSACCHARIDES. PART IV. STRUCTURAL STUDIES ON THE TYPE II PNEUMOCOCCUS SPECIFIC POLYSACCHARIDE. J. CHEM. SOC. 1537-1541.

(1718) CIFONELLI, J. A., P. A. REBERS, M. B. PERRY, AND J. K. N. JONES. 1966. THE CAPSULAR POLYSACCHARIDE OF PNEUMOCOCCUS TYPE XII, SXII. BIOCHEMISTRY 5:3066-3072.

(1719) DUKE, J. L., I. J. GOLDSTEIN, AND J. A. CIFONELLI. 1974. STRUCTURAL STUDIES OF CAPSULAR POLYSACCHARIDE OF TYPE XII DIPLOCOCCUS PNEUMONIAE. CARBOHYDR. RES. 37:81-88.

(1720) GENGHOF, D. S., E. J. HEHRE, AND J. M. NEILL. 1946. SEROLOGICAL REACTIONS OF LEVANS FORMED FROM SUCROSE AND RAFFINOSE BY CERTAIN BACILLI. (COMPARISON WITH DEXTRAN.) PROC. SOC. EXP. BIOL. MED. 61:339-342.

(1721) HEHRE, E. J. 1945. SEROLOGICAL REACTIONS ON LEVANS SYNTHESIZED FROM SUCROSE AND RAFFINOSE BY BACTERIAL ENZYMES. (COMPARISON WITH DEXTRAN.) PROC. SOC. EXP. BIOL. MED. 58:219-221.

(1722) ------ AND J. M. NEILL. 1946. FORMATION OF SEROLOGICALLY REACTIVE DEXTRANS BY STREPTOCOCCI FROM SUBACUTE BACTERIAL ENDOCARDITIS. J. EXP. MED. 83:147-162.

(1723) ------ AND D. M. HAMILTON. 1949. BACTERIAL CONVERSION OF DEXTRIN INTO A POLYSACCHARIDE WITH THE SEROLOGICAL PROPERTIES OF DEXTRAN. PROC. SOC. EXP. BIOL. MED. 71:336-339.

(1724) ------ AND J. M. NEILL. 1952. SEROLOGICAL DIFFERENCES AMONG NATIVE AND CLINICAL DEXTRANS [AN ABSTRACT]. FED. PROC. 11:471.

(1725) ------. 1956. SEROLOGICAL-CHEMICAL CORRELATIONS IN THE DEXTRAN CLASS OF POLYSACCHARIDES [ABSTRACT 5]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 129:3D.

(1726) ------. 1960. CONTRIBUTION OF CLASSICAL IMMUNOLOGY TO THE DEVELOPMENT OF KNOWLEDGE OF DEXTRAN STRUCTURE. BULL. SOC. CHIM. BIOL. 43:1581-1585.

(1727) HEIDELBERGER, M., N. ROY, AND C. P. J. GLAUDEMANS. 1969. INHIBITION BY ALDOBIOURONATES IN THE PRECIPITATION OF PNEUMOCOCCAL TYPE II AND III SYSTEMS. (STRUCTURE OF PNEUMOCOCCAL TYPE II POLYSACCHARIDE.) BIOCHEMISTRY 8:4822-4824.

(1728) LARM, O., B. LINDBERG, S. SVENSSON, AND E. A. KABAT. 1972. STRUCTURAL STUDIES ON PNEUMOCOCCUS TYPE II. CAPSULAR POLYSACCHARIDE. CARBOHYDR. RES. 22:391-397.

(1729) MAURER, P. H. 1953. DEXTRAN, AN ANTIGEN IN MAN. PROC. SOC. EXP. BIOL. MED. 83:879-884.

(1730) NEILL, J. M., E. J. HEHRE, J. Y. SUGG, AND E. JAFFE. 1939. SEROLOGICAL STUDIES ON SUGAR. I. REACTIONS BETWEEN SOLUTIONS OF REAGENT SUCROSE AND TYPE II ANTIPNEUMOCOCCUS SERUM. J. EXP. MED. 70:427-442.

(1731) ------, J. Y. SUGG, E. J. HEHRE, AND E. JAFFE. 1941. SEROLOGICAL STUDIES ON SUGAR. II. REACTIONS OF THE ANTISERUMS OF TYPE 2 PNEUMOCOCCUS AND OF LEUCONOSTOC MESENTEROIDES WITH CANE AND BEET SUGARS AND CANE JUICE. AM. J. HYG. 34:65-78.

(1732) ------, J. Y. SUGG, E. J. HEHRE, AND E. JAFFE. 1941. SEROLOGICAL STUDIES ON SUGAR. III. REACTIONS OF THE ANTISERUMS OF TYPE 2 PNEUMOCOCCUS AND OF LEUCONOSTOC MESENTEROIDES WITH SUGARS AND SIRUPS OF PALM, MAPLE, AND SORGHUM ORIGINS AND WITH SAUERKRAUT JUICE. AM. J. HYG. 34:79-81.

(1733) ------ AND I. ABRAHAMS. 1951. REACTIONS OF DEXTRANS WITH ANTISERUMS OF RABBITS IMMUNIZED WITH S. TYPHI. PROC. SOC. EXP. BIOL. MED. 78:537-540.

(1734) ------, A. H. PINKES, AND C. E. KAPROS. 1952. AGGLUTINATION OF A STRAIN OF L. MESENTEROIDES, AND ITS SELECTIVE INHIBITION WITH DEXTRANS AND WITH NON-DEXTRAN LEUCONOSTOC ANTIGENS [ABSTRACT M42]. BACTERIOL. PROC. 92.

(1735) ------ AND A. H. PINKES. 1954. ANTIPNEUMOCOCCAL CROSS REACTIONS OF ANTIGENS OF LEUCONOSTOC MESENTEROIDES. PROC. SOC. EXP. BIOL. MED. 87:553-559.

(1736) PINKES, A. H., AND J. M. NEILL. 1957. SEROLOGICAL REACTIONS OF EXTRACELLULAR SOLUBLE SUBSTANCES OF CROWN GALL BACTERIA (AGROBACTERIUM TUMEFACIENS). (COMPARISON WITH DEXTRANS.) J. IMMUNOL. 79:525-530.

(1737) SIMMONS, D. A. R. 1962. THE GLUCOSIDIC LINKAGES OF THE SHIGELLA FLEXNERI POLYSACCHARIDES. (SEROLOGY INDICATES SIMILARITY OF POLYSACCHARIDES TO DEXTRAN.) BIOCHEM. J. 84:353-360.

(1738) SUGG, J. Y., E. J. HEHRE, AND J. M. NEILL. 1942. SEROLOGICALLY SIMILAR POLYSACCHARIDES PRODUCED FROM SUCROSE BY CERTAIN STREPTOCOCCI AND BY LEUCONOSTOC MESENTEROIDES. [ABSTRACT G34]. J. BACTERIOL. 43:24-25.

(1739) ------ AND E. J. HEHRE. 1942. REACTIONS OF DEXTRANS OF LEUCONOSTOC MESENTEROIDES WITH THE ANTISERUMS OF LEUCONOSTOC AND OF TYPE 2, 20 AND 12 PNEUMOCOCCUS. J. IMMUNOL. 43:119-128.

(1740) SUZUKI, H., AND E. J. HEHRE. 1964. THE DIFFERENTIATION OF SEROTYPE A AND B DEXTRANS BY MEANS OF PARTIAL ACETOLYSIS. ARCH. BIOCHEM. BIOPHYS. 104:305-313.

(1741) ZOZAYA, J. 1932. IMMUNOLOGICAL REACTIONS BETWEEN DEXTRAN POLYSACCHARIDE AND SOME BACTERIAL ANTISERA. J. EXP. MED. 55:353-360.

SEE ALSO: 126 1642 1672 1679 1755 1759 THROUGH 1762 1767 1768 1788

D. Immunochemical Studies on Dextrans

(1742) ALLEN, P. Z., AND E. A. KABAT. 1956. IMMUNOCHEMICAL STUDIES ON DEXTRANS. J. AM. CHEM. SOC. 78:1890-1894.

(1743) ------ AND E. A. KABAT. 1957. STUDIES ON THE CAPACITY OF SOME POLYSACCHARIDES TO ELICIT ANTIBODY FORMATION IN MAN. J. EXP. MED. 105:383-394.

(1744) ------ AND E. A. KABAT. 1958. PERSISTENCE OF CIRCULATING ANTIBODIES IN HUMAN SUBJECTS IMMUNIZED WITH DEXTRAN, LEVAN AND BLOOD GROUP SUBSTANCES. J. IMMUNOL. 80:495-500.

(1745) ------ AND E. A. KABAT. 1959. IMMUNOCHEMICAL STUDIES ON DEXTRANS. II. ANTIDEXTRAN SPECIFICITIES INVOLVING THE ALPHA 1,3 AND THE ALPHA 1,2 LINKED GLUCOSYL RESIDUES. J. AM. CHEM. SOC. 81:4382-4386.

(1746) ------, H. G. KUNKEL, AND E. A. KABAT. 1964. STUDIES ON HUMAN ANTIBODIES. II. DISTRIBUTION OF GENETIC FACTORS. J. EXP. MED. 119:453-465.

(1747) ------. 1965. SPECIFIC IMMUNOLOGICAL REACTIONS OF POLYSACCHARIDES. METHODS CARBOHYDR. CHEM. 5:232-246.

(1748) ARAKATSU, Y., G. ASHWELL, AND E. A. KABAT. 1966. IMMUNOCHEMICAL STUDIES ON DEXTRANS. V. SPECIFICITY AND CROSS-REACTIVITY WITH DEXTRANS OF THE ANTIBODIES FORMED IN RABBITS TO ISOMALTONIC AND ISOMALTOTRIONIC ACIDS COUPLED TO BOVINE SERUM ALBUMIN. J. IMMUNOL. 97:858-866.

(1749) BASSETT, E. W., S. W. TANENBAUM, K. PRYZWANSKY, AND OTHERS. 1965. STUDIES ON HUMAN ANTIBODIES. III. AMINO ACID COMPOSITION OF FOUR ANTIBODIES FROM ONE INDIVIDUAL. J. EXP. MED. 122:251-261.

(1750) CISAR, J., E. A. KABAT, M. M. DORNER, AND J. LIAO. 1975. BINDING PROPERTIES OF IMMUNOGLOBULIN COMBINING SITES SPECIFIC FOR TERMINAL OR NONTERMINAL ANTIGENIC DETERMINANTS IN DEXTRAN. J. EXP. MED. 142:435-459.

(1751) ------ AND E. A. KABAT. 1976. THE IMMUNOLOGY OF DEXTRANS. (A REVIEW.) IMMUNOL. ABSTR. SPEC. SUPPL. ON IMMUNOL. ASPECTS OF DENTAL CARIES, PP. 61-73. LIBRARY OF CONGRESS CATALOG NUMBER 76-8119.

(1752) DORNER, M. M., E. W. BASSETT, S. M. BEISER, AND OTHERS. 1967. STUDIES ON HUMAN ANTIBODIES. V. AMINO ACID COMPOSITION OF ANTIDEXTRANS OF THE SAME AND OF DIFFERING SPECIFICITIES FROM SEVERAL INDIVIDUALS. J. EXP. MED. 125:823-831.

(1753) ------ AND E. A. KABAT. 1968. IMMUNOCHEMICAL STUDIES ON DEXTRANS. VI. REACTIVITY WITH ANTIDEXTRAN OF LOW MOLECULAR WEIGHT DEXTRAN AND ITS IRON-DEXTRAN COMPLEX ("IMFERON"). IMMUNOCHEMISTRY 5:485-495.

(1754) EDBERG, S. C., P. M. BRONSON, AND C. J. VAN OSS. 1972. THE VALENCY OF IGM AND IGG RABBIT ANTIDEXTRAN ANTIBODY AS A FUNCTION OF THE SIZE OF THE DEXTRAN MOLECULE. IMMUNOCHEMISTRY 9:273-288.

(1755) ESTRADA-PARRA, S., AND M. HEIDELBERGER. 1963. THE SPECIFIC POLYSACCHARIDE OF TYPE XVIII PNEUMOCOCCUS. III. (CROSS REACTION OF THE ANTISERA WITH DEXTRANS.) BIOCHEMISTRY 2:1288-1294.

(1756) FINGER, I., E. A. KABAT, A. E. BEZER, AND A. KIDD. 1960. AGAR DIFFUSIOON STUDIES IN THE DEXTRAN-ANTIDEXTRAN SYSTEM. J. IMMUNOL. 84:227-230.

(1757) GELZER, J., AND E. A. KABAT. 1964. SPECIFIC FRACTIONATION OF HUMAN ANTIDEXTRAN ANTIBODIES. II. ASSAY OF HUMAN ANTIDEXTRAN SERA AND SPECIFICALLY FRACTIONATED PURIFIED ANTIBODIES BY MICROCOMPLEMENT FIXATION AND COMPLEMENT FIXATION INHIBITION TECHNIQUES. J. EXP. MED. 119:983-995.

(1758) ------ AND E. A. KABAT. 1964. SPECIFIC FRACTIONATION OF HUMAN ANTI-DEXTRAN ANTIBODIES. III. FRACTIONATION OF ANTIDEXTRAN BY SEQUENTIAL EXTRACTION WITH OLIGOSACCHARIDES OF INCREASING CHAIN LENGTH AND ATTEMPTS AT SUBFRACTIONATION. IMMUNOCHEMISTRY 1:303-316.

(1759) GOODMAN, J. W., AND E. A. KABAT. 1960. IMMUNOCHEMICAL STUDIES ON CROSS-REACTIONS OF ANTIPNEUMOCOCCAL SERA. I. CROSS-REACTIONS OF TYPES II AND XX ANTIPNEUMOCOCCAL SERA WITH DEXTRANS AND OF TYPE II ANTIPNEUMOCOCCAL SERUM WITH GLYCOGEN AND FRIEDLAENDER TYPE B POLYSACCHARIDE. J. IMMUNOL. 84:333-346.

(1760) ------ AND E. A. KABAT. 1960. IMMUNOCHEMICAL STUDIES ON CROSS-REACTIONS OF ANTIPNEUMOCOCCAL SERA. II. CROSS-REACTIONS OF TYPES IX AND XII ANTIPNEUMOCOCCAL SERA WITH DEXTRANS. J. IMMUNOL. 84:347-357.

(1761) ------ AND E. A. KABAT. 1960. IMMUNOCHEMICAL STUDIES ON THE CROSS-REACTIONS OF ANTIPNEUMOCOCCAL SERA. III. THE EFFECT OF VARIATION IN MOLECULAR WEIGHT ON THE CROSS-REACTIVITY OF DEXTRAN WITH TYPE II ANTIPNEUMOCOCCAL SERUM. J. IMMUNOL. 85:342-346.

(1762) ------ AND E. A. KABAT. 1964. IMMUNOCHEMICAL STUDIES ON CROSS-REACTIONS OF ANTIPNEUMOCOCCAL SERA. IV. CROSS-REACTIONS OF HORSE TYPE XXII ANTIPNEUMOCOCCAL SERUM WITH DEXTRANS. J. IMMUNOL. 93:213-219.

(1763) ------. 1975. ANTIGENIC DETERMINANTS AND ANTIBODY COMBINING SITES. IN M. SELA, ED. ANTIGENS, VOL. 3, PP. 127-187. ACADEMIC PRESS, NEW YORK.

(1764) HARISDANGKUL, V., AND E. A. KABAT. 1972. STUDIES ON HUMAN ANTIBODIES. IX. INTERACTION OF 1-(META-NITROPHENYL)-FLAVAZOLES OF ISOMALTOSE OLIGOSACCHARIDES WITH PURIFIED ANTIDEXTRANS: QUANTITATIVE HAPTEN-INHIBITION AND FLUORESCENCE QUENCHING STUDIES. J. IMMUNOL. 108:1232-12423.

(1765) ------, E. A. KABAT, R. M. MCDONOUGH, AND M. M. SIGEL. 1972. A PROTEIN IN NORMAL NURSE SHARK SERUM WHICH REACTS SPECIFICALLY WITH FRUCTOSANS. I. PURIFICATION AND IMMUNOCHEMICAL CHARACTERIZATION. (ANOTHER PROTEIN REACTED SPECIFICALLY WITH 1,3-LINKED DEXTRAN.) J. IMMUNOL. 108:1244-1258.

(1766) HEIDELBERGER, M., AND A. C. AISENBERG. 1953. SEROLOGICAL REACTIVITY OF SYNTHETIC POLYGLUCOSES. (COMPARISON WITH DEXTRANS.) NATL. ACAD. SCI. 39:453-459.

(1767) ------. 1960. STRUCTURE AND IMMUNOLOGICAL SPECIFICITY OF POLYSACCHARIDES. IN L. ZECHMEISTER, ED., FORTSCHRITTE DER CHEMIE ORGANISCHER NATURSTOFFE XVIII, PP. 503-536. SPRINGER-VERLAG, WIEN.

(1768) ------ AND P. A. REBERS. 1960. IMMUNOCHEMISTRY OF THE PNEUMOCOCCAL TYPES II, V AND VI. I. THE RELATION OF TYPE VI TO TYPE II AND OTHER CORRELATIONS BETWEEN CHEMICAL CONSTITUTION AND PRECIPITATION IN ANTISERA TO TYPE VI. J. BACTERIOL. 80:145-153.

(1769) KABAT, E. A., AND D. BERG. 1953. DEXTRAN--AN ANTIGEN IN MAN. J. IMMUNOL. 70:514-532.

(1770) ------, D. BERG, D. RITTENBERG, AND OTHERS. 1954. PRECIPITATION OF C14-LABELED DEXTRAN BY HUMAN ANTI-DEXTRAN. J. AM. CHEM. SOC. 76:564-566.

(1771) ------. 1954. SOME CONFIGURATIONAL REQUIREMENTS AND DIMENSIONS OF THE COMBINING SITE ON AN ANTIBODY TO A NATURALLY OCCURRING ANTIGEN. J. AM. CHEM. SOC. 76:3709-3713.

(1772) ------. 1956. HETEROGENEITY IN EXTENT OF THE COMBINING REGIONS OF HUMAN ANTIDEXTRAN. J. IMMUNOL. 77:377-385.

(1773) ------, G. M. TURINO, A. B. TARROW, AND P. H. MAURER. 1957. STUDIES ON THE IMMUNOCHEMICAL BASIS OF ALLERGIC REACTIONS TO DEXTRAN IN MAN. J. CLIN. INVEST. 36:1160-1170.

(1774) ------. 1957. SIZE AND HETEROGENEITY OF THE COMBINING SITES ON AN ANTIBODY MOLECULE. J. CELL. COMP. PHYSIOL. 50(1):79-102.

(1775) ------. 1957. [IMMUNOCHEMICAL STUDIES ON THE DEXTRANS AND THE BLOOD GROUP SUBSTANCES] (IN FRENCH). REV. HEMATOL. 12:606-624.

(1776) ------. 1958. [IMMUNOCHEMICAL STUDIES ON DEXTRANS AND BLOOD GROUP SUBSTANCES] (IN GERMAN). BEHRINGWERK-MITT. 34:39-71.

(1777) ------. 1958. IMMUNOCHEMICAL APPROACHES TO POLYSACCHARIDE AND MUCOPOLYSACCHARIDE STRUCTURE. IN G. E. WOLSTENHOLME AND MAEVE O'CONNOR, EDS. CHEMISTRY AND BIOLOGY OF MUCOPOLYSACCHARIDES, PP. 42-63. LITTLE BROWN AND CO., BOSTON, MASS.

(1778) ------. 1958. A CRITIQUE OF PRECIPITIN METHODS AS APPLIED TO THE ELUCIDATION OF IMMUNOCHEMICAL RELATIONSHIPS AMONG ANTIGENS. IN SEROLOGICAL AND BIOCHEMICAL COMPARISON OF PROTEINS, PP. 92-112. XIV ANNUAL PROTEIN CONFERENCE, RUTGERS UNIVERSITY.

(1779) ------ AND A. E. BEZER. 1958. THE EFFECT OF VARIATION IN MOLECULAR WEIGHT ON THE ANTIGENICITY OF DEXTRAN IN MAN. ARCH. BIOCHEM. BIOPHYS. 78:306-318.

(1780) ------. 1960. THE UPPER LIMIT FOR THE SIZE OF THE HUMAN ANTIDEXTRAN COMBINING SITE. J. IMMUNOL. 84:82-85.

(1781) ------. 1960. IMMUNOCHEMICAL CONTRIBUTIONS TO THE ELUCIDATION OF DEXTRAN STRUCTUURE. BULL. SOC. CHIM. BIOL. 42:1549-1568.

(1782) ------. 1962. INTRODUCTION--STRUCTURES OF SOME DETERMINANTS OF ANTIGENIC SPECIFICITY. FED. PROC. 21:692-693.

(1783) ------. 1962. ANTIGENIC DETERMINANTS OF DEXTRANS AND BLOOD GROUP SUBSTANCES. FED. PROC. 21:694-701.

(1784) ------, P. LIACOPOULOS, M. LIACOPOULOS-BRIOT, AND OTHERS. 1963. STUDIES ON THE SENSITIZING PROPERTIES OF HUMAN ANTISERA AND PURIFIED ANTIBODIES. J. IMMUNOL. 90:810-818.

(1785) ------. 1967. HETEROGENEITY OF ANTIBODY TO ANTIGENIC DETERMINANTS OF POLYSACCHARIDES. GAMMA GLOBULINS, PROC. NOBEL SYMP. 3RD, 207-220. ALSO IN CHEM. ABSTR. 1969. 70:36075N.

(1786) ------. 1976. STRUCTURAL CONCEPTS IN IMMUNOLOGY AND IMMUNOCHEMISTRY 2ND ED. HOLT, RINEHART AND WINSTON, INC. NEW YORK AND CHICAGO, 547 PP.

(1787) KANE, J. A., AND W. W. KARAKAWA. 1971. IMMUNOCHEMISTRY OF CAPSULAR GLUCANS ISOLATED FROM STREPTOCOCCUS BOVIS. (CHEMICAL ANALOGY WITH B-512 CLINICAL DEXTRAN.) J. IMMUNOL. 106:103-109.

(1788) KNOX, K. W., AND A. J. WICKEN. 1972. REACTION OF DEXTRANS WITH ANTISERA TO TEICHOIC ACIDS. ARCH. ORAL BIOL. 17:1491-1494.

(1789) MAGE, R. G., AND E. A. KABAT. 1963. IMMUNOCHEMICAL STUDIES ON DEXTRANS. III. THE SPECIFICITIES OF RABBIT ANTIDEXTRANS. FURTHER FINDINGS ON ANTIDEXTRANS WITH 1,2- AND 1,6-SPECIFICITIES. J. IMMUNOL. 91:633-640.

(1790) OUTSCHOORN, I. M., G. ASHWELL, F. GRUEZO, AND E. A. KABAT. 1974. IMMUNOCHEMICAL STUDIES ON DEXTRANS. VIII. SPECIFICITY AND CROSS-REACTIVITY WITH DEXTRANS OF THE ANTIBODIES FORMED IN RABBITS TO ISOMALTOHEXAONIC ACID COUPLED TO BOVINE SERUM ALBUMIN. J. IMMUNOL. 113:896-903.

(1791) ROSENFEL'D, E. L. 1960. ON THE ROLE OF THE LENGTH OF THE OUTER BRANCHES OF VARIOUS DEXTRAN MOLECULES IN THE REACTION BETWEEN DEXTRANS AND ANTIDEXTRANS. (A LECTURE.) BULL. SOC. CHIM. BIOL. 42:1575-1579. ALSO IN CHEM. ABSTR. 1962. 56:9300I.

(1792) SCHLOSSMAN, S. F., AND E. A. KABAT. 1962. SPECIFIC FRACTIONATION OF A POPULATION OF ANTIDEXTRAN MOLECULES WITH COMBINING SITES OF VARIOUS SIZES. J. EXP. MED. 116:535-552.

(1793) ------, M. L. ZARNITZ, AND E. A. KABAT, AND OTHERS. 1963. IMMUNOCHEMICAL STUDIES ON PULLULAN, AN EXTRACELLULAR POLYSACCHARIDE FROM PULLARIA PULLULANS. (COMPARISON WITH DEXTRANS.) J. IMMUNOL. 91:50-57.

(1794) SVENSSON, S., S. G. HAMMARSTROM, AND E. A. KABAT. 1970. EFFECT OF BORATE ON POLYSACCHARIDE-PROTEIN AND ANTIGEN-ANTIBODY REACTIONS AND ITS USE FOR THE PURIFICATION AND FRACTIONATION OF CROSSREACTING ANTIBODIES. IMMUNOCHEMISTRY 7:413-422.

(1795) SWINEFORD, O., JR., R. HOENE, S. QUELCH, AND D. SAMSELL. 1959. PURIFICATION OF ANTIBODIES. I. DEXTRANASE PURIFICATION OF ANTIBODY PRECIPITATED FROM TYPE II ANTIPNEUMOCOCCAL RABBIT SERUM BY DEXTRAN. J. ALLERGY 30:433-438.

(1796) TORII, M., E. A. KABAT, AND H. WEIGEL. 1966. IMMUNOCHEMICAL STUDIES ON DEXTRANS. IV. FURTHER CHARACTERIZATION OF THE DETERMINANT GROUPS ON VARIOUS DEXTRANS INVOLVED IN THEIR REACTIONS WITH THE HOMOLOGOUS HUMAN ANTIDEXTRANS. J. IMMUNOL. 96:797-805.

(1797) ------, K. SAKAKIBARA, AND E. A. KABAT. 1973. IMMUNOCHEMICAL STUDIES ON DEXTRANS. VII. FURTHER CHARACTERIZATION OF THE COMBINING SITES OF HUMAN AND RABBIT ANTIDEXTRANS AND HORSE ANTIPNEUMOCOCCAL ANTIBODIES BY OLIGOSACCHARIDE INHIBITION STUDIES WITH TRISACCHARIDES OF GLUCOSE CONTAINING ALPH(1,2) AND ALPHA(1,6) LINKAGES. J. IMMUNOL. 110:951-958.

(1798) YOUNT, W. J., M. M. DORNER, H. G. KUNKEL, AND E. A. KABAT. 1968. STUDIES ON HUMAN ANTIBODIES. VI. SELECTIVE VARIATIONS IN SUBGROUP COMPOSITION AND GENETIC MARKERS. J. EXP. MED. 127:633-646.

SEE ALSO: 748 749 1686 1828 2505

E. Dextrans in Studies on Myeloma Immunoglobulins

(1799) APPELLA, E., K. R. MCINTIRE, AND R. N. PERHAM. 1967. LAMBDA BENCE JONES PROTEINS OF THE MOUSE: CHEMICAL AND IMMUNOLOGICAL CHARACTERIZATION. J. MOL. BIOL. 27:391-394.

(1800) ------. 1971. AMINO ACID SEQUENCES OF TWO MOUSE IMMUNOGLOBULIN LAMBDA CHAINS. PROC. NATL. ACAD. SCI. U.S.A. 68:590-594.

(1801) BARSTAD, P., V. FARNSWORTH, M. G. WEIGERT, AND OTHERS. 1974. MOUSE IMMUNOGLOBULIN HEAVY CHAINS ARE CODED BY MULTIPLE GERM LINE VARIABLE REGION GENES. PROC. NATL. ACAD. SCI. U.S.A. 71:4096-4100.

(1802) ------, S. RUDIKOFF, M. POTTER, AND OTHERS. 1974. IMMUNOGLOBULIN STRUCTURE. AMINO TERMINAL SEQUENCES OF MOUSE MYELOMA PROTEINS THAT BIND PHOSPHORYLCHOLINE. SCIENCE 183:962-964.

(1803) BHOOPALAM, N., V. YAKULIS, AND P. HELLER. 1975. SPECIFIC ENHANCEMENT OF IMMUNE RESPONSE TO DEXTRAN-S BY PLASMACYTOMA MOPC 104E RNA [ABSTRACT 4421]. FED. PROC. 34(3):999.

(1804) BLOMBERG, B., W. R. GECKELER, AND M. G. WEIGERT. 1972. GENETICS OF THE ANTIBODY RESPONSE TO DEXTRAN IN MICE. SCIENCE 177:178-180.

(1805) ------, D. CARSON, AND M. G. WEIGERT. 1973. IMMUNE RESPONSE TO DEXTRAN IN MICE. SPECIFIC RECEPT. ANTIBODIES ANTIGENS CELLS INT. CONVOCATION IMMUNOL. PROC. 3RD, 285-293. ALSO IN CHEM. ABSTR. 1974. 80:58259J.

(1806) CARSON, D., AND M. G. WEIGERT. 1973. IMMUNOCHEMICAL ANALYSIS OF THE CROSS-REACTING IDIOTYPES OF MOUSE MYELOMA PROTEINS WITH ANTI-DEXTRAN ACTIVITY AND NORMAL ANTI-DEXTRAN ANTIBODY. PROC. NATL. ACAD. SCI. U.S.A. 70:235-239.

(1807) CESARI, I. M., AND M. G. WEIGERT. 1973. MOUSE LAMBDA-CHAIN SEQUENCES. PROC. NATL. ACAD. SCI. U.S.A. 20:2112-2116.

(1808) CISAR, J., E. A. KABAT, J. LIAO, AND M. POTTER. 1974. IMMUNOCHEMICAL STUDIES ON MOUSE MYELOMA PROTEINS REACTIVE WITH DEXTRANS OR WITH FRUCTOSANS AND ON HUMAN ANTILEVANS. J. EXP. MED. 139:159-179.

(1809) GECKLER, W., B. BLOMBERG, C. DE PREVAL, AND M. COHN. 1976. ON THE GENETIC DISSECTION OF A SPECIFIC HUMORAL IMMUNE RESPONSE TO ALPHA-1,3-DEXTRAN. COLD SPRING HARBOR SYMP. QUANT. BIOL. 42.

(1810) GHANTA, V. K., N. M. HAMLIN, T. G. PRETLOW, AND R. N. HIRAMOTO. 1972. USE OF DEXTRAN-CONJUGATED SRBC FOR THE DETECTION OF MOPC 104E TUMOR CELLS. J. IMMUNOL. 109:810-815.

(1811) ------, N. M. HAMLIN, AND R. N. HIRAMOTO. 1973. USE OF FLUORESCEIN CONJUGATED DEXTRAN FOR THE DETECTION OF MOPC 104E TUMOR CELLS. IMMUNOCHEMISTRY 10:51-53.

(1812) GLAUDEMANS, C. P. J. 1975. THE INTERACTION OF HOMOGENEOUS, MURINE MYELOMA IMMUNOGLOBULINS WITH POLYSACCHARIDE ANTIGENS. ADV. CARBOHYDR. CHEM. BIOCHEM. 31:313-346.

(1813) GREY, H. M., J. W. HIRST, AND M. COHN. 1971. A NEW MOUSE IMMUNOGLOBULIN:IGG3. J. EXP. MED. 133:289-304.

(1814) HANSBURG, D. L., D. E. BRILES, AND J. M. DAVIE. 1976. STRUCTURAL AND IDIOTYPIC CHARACTERISTICS OF MURINE ANTI-ALPHA(1,3)-DEXTRAN ANTIBODIES. IMMUNOGENETICS 3(6):IN PRESS.

(1815) ------, D. E. BRILES, AND J. M. DAVIE. 1976. ANALYSIS OF THE DIVERSITY OF THE MURINE ANTI-DEXTRAN RESPONSE. I. GENERATION OF A LARGE, PAUCI-CLONAL RESPONSE BY A BACTERIAL VACCINE. J. IMMUNOL. 117:569-575.

(1816) HIRAMOTO, R. N., V. K. GHANTA, J. R. MCGHEE, AND OTHERS. 1972. USE OF DEXTRAN CONJUGATED COLUMNS FOR THE ISOLATION OF LARGE QUANTITIES OF MOPC 104E IGM. IMMUNOCHEMISTRY 9:1251-1253.

(1817) ------ AND V. K. GHANTA. 1973. STUDIES OF MOPC 104E PLASMACYTOMA CELLS FORMING ROSETTES WITH AUTOLOGOUS AND SYNGENEIC ERYTHROCYTES. J. IMMUNOL. 111:893-899.

(1818) ------, V. K. GHANTA, J. R. MCGHEE, AND N. M. HAMLIN. 1973. A MATHEMATICAL MODEL FOR THE QUANTITATION OF TUMOR AND ANTIBODY-FORMING CELL POPULATIONS WITHIN AN ANIMAL'S BODY. J. IMMUNOL. 111:1546-1553.

(1819) JOCIUS, I. B., AND M. A. LEON. 1974. PROPERTIES OF A CELL BOUND HOMOGENEOUS MURINE IGM ANTI-DEXTRAN. I. PASSIVE LYSIS OF DEXTRAN-COATED ERYTHROCYTES. IMMUNOCHEMISTRY 11:691-695.

(1820) ------ AND M. A. LEON. 1974. PROPERTIES OF A CELL-BOUND HOMOGENEOUS MURINE IGM ANTI-DEXTRAN. II. REACTIONS OF CELL-BOUND IGM WITH DEXTRAN AND HAPTEN. IMMUNOCHEMISTRY 11:697-702.

(1821) ------ AND M. A. LEON. 1975. PROPERTIES OF A CELL-BOUND HOMOGENEOUS MURINE IGM ANTI-DEXTRAN. III. REDUCTION AND ALKYLATION OF CELL-BOUND IGM. IMMUNOCHEMISTRY 12:73-79.

(1822) ------ AND M. A. LEON. 1975. PROPERTIES OF A CELL-BOUND HOMOGENEOUS MURINE IGM ANTI-DEXTRAN. IV. MODIFICATION OF REACTIONS OF CELL-BOUND IGM BY CONCANAVALIN A. IMMUNOCHEMISTRY 12:81-88.

(1823) LEON, M. A., AND T. TAKAHASHI. 1970. STIMULATION OF LYMPHOCYTES BY MYELOMA PROTEINS. PROC. LEUKOCYTE CULT. CONF. 5TH, 299-304. ALSO IN CHEM. ABSTR. 1971. 74:138603H.

(1824) ------, N. M. YOUNG, AND K. R. MCINTIRE. 1970. IMMUNOCHEMICAL STUDIES OF THE REACTION BETWEEN A MOUSE MYELOMA MACROGLOBULIN AND DEXTRANS. BIOCHEMISTRY 9:1023-1030.

(1825) LUNDBLAD, A., R. STELLER, E. A. KABAT, AND OTHERS. 1972. IMMUNOCHEMICAL STUDIES OF MOUSE MYELOMA PROTEINS WITH SPECIFICITY FOR DEXTRAN OR FOR LEVAN. IMMUNOCHEMISTRY 9:535-544.

(1826) MAYERS, G. L., R. B. BANKERT, AND D. PRESSMAN. 1976. STRUCTURAL IDENTITY OF A MURINE MYELOMA WITH AN INDUCED HOMOGENEOUS ANTIBODY [ABSTRACT 1499]. FED. PROC. 35(7):1650.

(1827) MCINTIRE, K. R., R. M. ASOFSKY, M. POTTER, AND E. L. KUFF. 1965. MACROGLOBULIN-PRODUCING PLASMA-CELL TUMOR IN MICE: IDENTIFICATION OF A NEW LIGHT CHAIN. SCIENCE 150:361-363.

(1828) NISONOFF, A., J. E. HOPPER, AND S. B. SPRING. 1975. MONOGRAPHS IN IMMUNOLOGY SERIES: THE ANTIBODY MOLECULE. ACADEMIC PRESS, NEW YORK AND LONDON. 560 PP.

(1829) POTTER, M., AND C. R. BOYCE. 1962. INDUCTION OF PLASMA-CELL NEOPLASMS IN STRAIN BALB/C MICE WITH MINERAL OIL AND MINERAL OIL ADJUVANTS. NATURE (LONDON) 193:1086-1087.

(1830) ------ AND M. A. LEON. 1968. THREE IGA MYELOMA IMMUNOGLOBULINS FROM THE BALB/C MOUSE: PRECIPITATION WITH PNEUMOCOCCAL C POLYSACCHARIDE. SCIENCE 162:369-371.

(1831) ------. 1972. IMMUNOGLOBULIN-PRODUCING TUMORS AND MYELOMA PROTEINS OF MICE. PHYSIOL. REV. 52:631-719.

(1832) RIBLET, R. J., B. BLOMBERG, M. G. WEIGERT, AND OTHERS. 1975. GENETICS OF MOUSE ANTIBIOTICS. I. LINKAGE OF THE DEXTRAN RESPONSE LOCUS, VH-DEX, TWO ALLOTYPES. EUR. J. IMMUNOL. 5:775-777.

(1833) SCHULENBURG, E. P., E. S. SIMMS, R. G. LYNCH, AND OTHERS. 1971. AMINO ACID SEQUENCE OF THE LIGHT CHAIN FROM A MOUSE MYELOMA PROTEIN WITH ANTI-HAPTEN ACTIVITY: EVIDENCE FOR A THIRD TYPE OF LIGHT CHAIN. PROC. NATL. ACAD. SCI. U.S.A. 68:2623-2626.

(1834) WEIGERT, M. G., I. M. CESARI, S. J. YONKOVICH, AND M. COHN. 1970. VARIABILITY IN THE LAMBDA LIGHT CHAIN SEQUENCES OF MOUSE ANTIBODY. NATURE (LONDON) 228:1045-1047.

(1835) ------, W. C. RASCHKE, D. CARSON, AND M. COHN. 1974. IMMUNOCHEMICAL ANALYSIS OF THE IDIOTYPES OF MOUSE MYELOMA PROTEINS WITH SPECIFICITY FOR LEVAN OR DEXTRAN. J. EXP. MED. 139:137-147.

(1836) YOUNG, N. M., I. B. JOCIUS, AND M. A. LEON. 1971. BINDING PROPERTIES OF MOUSE IMMUNOGLOBULIN MYELOMA PROTEIN WITH CARBOHYDRATE SPECIFICITY. BIOCHEMISTRY 10:3457-3460.

SEE ALSO: 1123 1750 2499 2505

F. Action of Dextrans and Dextran Derivatives on Complement, Conglutinin, and Properdin

(1837) BLUM, L. 1964. EVIDENCE FOR IMMUNOLOGICAL SPECIFICITY OF THE PROPERDIN SYSTEM. DEMONSTRATION, ISOLATION AND PROPERTIES OF A SERUM FACTOR WHICH INTERACTS WITH ZYMOSAN AND OTHER POLYSACCHARIDES AT 0 DEGREES C. J. IMMUNOL. 92:61-72.

(1838) FJELLSTROM, K. E. 1963. THE EFFECT OF CROSS-LINKED DEXTRAN GEL (SEPHADEX) ON HUMAN COMPLEMENT WITH SPECIAL REFERENCE TO THE THIRD COMPONENT (C'3). ACTA PATHOL. MICROBIOL. SCAND. 59(1):109-123. ALSO IN CHEM. ABSTR. 60:8487C.

(1839) HADDING, U., M. DIERICH, W. KOENIG, AND OTHERS. 1973. ABILITY OF THE T CELL-REPLACING POLYANION DEXTRAN SULFATE TO TRIGGER THE ALTERNATE PATHWAY COMPLEMENT ACTIVATION. EUR. J. IMMUNOL. 3(8):527-529. ALSO IN CHEM. ABSTR. 1974. 80:25759U.

(1840) KNAPP, W. 1974. INTERACTIONS OF THE THIRD COMPONENT OF COMPLEMENT (C'3) WITH CROSSLINKED DEXTRAN. I. BINDING OF C'3 FROM NORMAL HUMAN SERUM TO CROSSLINKED DEXTRAN AS DEFINED BY QUANTITATIVE IMMUNOFLUORESCENCE. Z. IMMUNITAETSFORSCH. EXP. KLIN. IMMUNOL. 148(3):213-224. ALSO IN CHEM. ABSTR. 1975. 82:84281W.

(1841) LACHMANN, P. J. 1970. CONGLUTININ AND IMMUNOGLOBULINS. ADV. IMMUNOL. 6:479-527.

(1842) LEON, M. A. 1956. QUANTITATIVE STUDIES ON THE PROPERDIN-COMPLEMENT SYSTEM. J. EXP. MED. 103:285-293.

(1843) ------. 1957. ROLE OF CATIONS IN CONGLUTINATION AND IN FORMATION OF PROPERDIN ZYMOSAN COMPLEX FROM BOVINE SERUM. PROC. SOC. EXP. BIOL. MED. 96:202-204.

(1844) ------. 1958. QUANTITATIVE STUDIES OF THE PROPERDIN-COMPLEMENT SYSTEM. III. KINETICS OF THE REACTION BETWEEN C'3 AND THE PROPERDIN-ZYMOSAN COMPLEX. J. IMMUNOL. 81:23-28.

(1845) ------ AND D. J. TIPPER. 1959. STERIC REQUIREMENTS FOR INHIBITION OF THE REACTION BETWEEN DEXTRANS AND THE PROPERDIN SYSTEM [ABSTRACT 142]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 136:65C-66C.

(1846) ------. 1960. THE REACTION BETWEEN DEXTRANS AND THE PROPERDIN-COMPLEMENT SYSTEM. I. INHIBITION BY EXCESS DEXTRAN. J. IMMUNOL. 85:190-196.

(1847) ------ AND R. YOKOHARI. 1964. CONGLUTINATION: SPECIFIC INHIBITION BY CARBOHYDRATES. SCIENCE 143:1327-1328.

(1848) LEPOW, I. H. 1965. SERUM COMPLEMENT AND PROPERDIN. IMMUNOL. DIS. 188-210.

(1849) MUELLER-EBERHARD, H. J. 1969. COMPLEMENT. ANN. REV. BIOCHEM. 38:389-414.

(1850) PILLEMER, L., L. BLUM, I. H. LEPOW, AND OTHERS. 1954. THE PROPERDIN SYSTEM AND IMMUNITY. I. DEMONSTRATION AND ISOLATION OF A NEW SERUM PROTEIN, PROPERDIN, AND ITS ROLE IN IMMUNE PHENOMENA. SCIENCE 120:279-285.

(1851) ------, M. D. SCHOENBERG, L. BLUM, AND L. WURZ. 1955. PROPERDIN SYSTEM AND IMMUNITY. II. INTERACTION OF THE PROPERDIN SYSTEM WITH POLYSACCHARIDES. SCIENCE 122:545-549.

(1852) ------. 1956. THE NATURE OF THE PROPERDIN SYSTEM AND ITS INTERACTIONS WITH POLYSACCHARIDE COMPLEXES. ANN. N.Y. ACAD. SCI. 66(2):233-243.

(1853) PONTIERI, G. M., O. J. PLESCIA, AND W. J. NICKERSON. 1963. INACTIVATION OF COMPLEMENT BY POLYSACCHARIDES. J. BACTERIOL. 86:1121-1122.

(1854) RICE, C. E., P. BOULANGER, AND E. ANNAU. 1954. THE EFFECT OF REPEATED INJECTION OF DEXTRAN OR POLYVINYLPYRROLIDONE ON SERUM COMPLEMENT IN GUINEA PIGS. CAN. J. PUBLIC HEALTH 45:264-267. ALSO IN BIOL. ABSTR. 1955. 29:16670.

(1855) ROSS, O. A. 1956. THE PROPERDIN SYSTEM IN RELATION TO FATAL BACTEREMIA FOLLOWING TOTAL-BODY IRRADIATION OF LABORATORY ANIMALS. ANN. N.Y. ACAD. SCI. 66(2):274-279.

(1856) ROTH, F. B., AND L. PILLEMER. 1956. INTERACTION OF DEXTRANS AND OTHER POLYSACCHARIDES WITH THE PROPERDIN SYSTEM [ABSTRACT 3]. AM. CHEM. SOC. ABSTRACTS OF PAPERS 129:2D.

(1857) SAGE, H. J., A. RANSBY, AND M. A. LEON. 1963. QUANTITATIVE STUDIES OF A CONGLUTINATING SYSTEM IN NORMAL BOVINE SERUM. I. ISOLATION OF CONGLUTININ, ANTIBODY AND COMPONENTS OF COMPLEMENT. J. IMMUNOL. 90:347-357.

SEE ALSO: 1877 2238 2500

G. Methods: Analytical; Preparative

(1858) GOLDBERG, R. J., AND D. H. CAMPBELL. 1951. THE LIGHT-SCATTERING PROPERTIES OF AN ANTIGEN-ANTIBODY REACTION. J. IMMUNOL. 66:79-86.

(1859) HELLSING, K., AND W. RICHTER. 1974. IMMUNOCHEMICAL QUANTITATION OF DEXTRAN BY A POLYMER ENHANCED NEPHELOMETRIC PROCEDURE. J. IMMUNOL. METHODS 5:147-151. ALSO IN CHEM. ABSTR. 1974. 81:132525G.

(1860) KABAT, E. A., AND M. M. MAYER. 1961. EXPERIMENTAL IMMUNOCHEMISTRY, 2ND EDITION. CHARLES C. THOMAS PUBLISHERS, SPRINGFIELD, ILLINOIS. PP. 920.

(1861) RICHTER, W. 1971. A SIMPLE METHOD FOR QUANTITATION OF HAPTENS USING 'INDIRECT' SINGLE RADIAL IMMUNODIFFUSION. J. IMMUNOL. 107:948-952.

(1862) ------. 1972. MICROMETHOD FOR IMMUNOCHEMICAL QUANTITATION OF DEXTRAN AND STUDIES ON ROLE OF ANTIGEN SIZE IN SINGLE RADIAL IMMUNODIFFUSION. INT. ARCH. ALLERGY APPL. IMMUNOL. 43:700-715. ALSO IN CHEM. ABSTR. 1973. 78:69973X.

(1863) SVENSSON, S., G. VICARI, AND S. WILKINSON. 1976. AN IMPROVED METHOD FOR SYNTHESISING O-STEAROYLDEXTRAN FOR THE DETECTION OF PLAQUE FORMING CELLS SPECIFIC FOR THE ALPHA-(1-6) DETERMINANT. J. IMMUNOL. METHODS 9:315-321.

SEE ALSO: 1066 1071 1072 1451 1455 1523
1747 1750 1758 1792 1810 1811 1816 1818 2371

H. High Molecular Weight Dextrans: Role in Shwartzmann Phenomenon and in Virulence Enhancement

(1864) ANONYMOUS. 1956. DEXTRAN AND WOUND INFECTIONS. LANCET 271:1297.

(1865) BENNETT, I. L., JR. 1952. PRODUCTION OF FEVER AND THE SHWARTZMAN PHENOMENON BY NATIVE DEXTRAN. PROC. SOC. EXP. BIOL. MED. 81:266-268.

(1866) DAVIES, A. M., M. SHILO, AND S. HESTRIN. 1955. THE INFLUENCE OF AEROBACTER LEVAN ON THE PERMEABILITY OF THE BLOOD VESSELS OF THE SKIN: STUDIES WITH ANTIBODY GLOBULINS AND TRYPAN BLUE. (DEXTRAN INCLUDED.) BR. J. EXP. PATHOL. 36:500-506.

(1867) FODOR, T., AND M. KERTAY. 1961. [THE INFLUENCE OF DEXTRAN ON EXPERIMENTAL TUBERCULOSIS OF GUINEA PIGS] (IN GERMAN). ZENTRABL. BAKTERIOL. PARASITENKD. ORIG. 181:249-252. ALSO IN CHEM. ABSTR. 1961. 55:12540F.

(1868) FRIEDBERG, D., AND M. SHILO. 1965. INFECTION PROMOTING ACTIVITY OF HIGH MOLECULAR WEIGHT MICROBIAL POLYSACCHARIDES ON MOUSE PERITONEAL INFECTIONS WITH PASTEURELLA PESTIS. J. INFECT. DIS. 115:263-270.

(1869) FUKUI, G. M., AND M. CARDINALE. 1967. EFFECT OF DEXTRANS ON BACTERIAL INFECTIONS IN MICE. ADVAN. EXP. MED. BIOL. 1:300-314. ALSO IN CHEM. ABSTR. 1968. 69:75391M.

(1870) HART, P.D'A., AND P. J. JACQUES. 1969. SUGGESTED ROLE OF LYSOSOMAL LIPID IN THE CONTRASTING EFFECTS OF 'TRITON WR-1339' AND DEXTRAN ON TUBERCULOUS INFECTION. NATURE (LONDON) 222:672-673.

(1871) HESTRIN, S., M. SHILO, AND D. S. FEINGOLD. 1954. INFECTION PROMOTING ACTIVITY OF LEVAN AND DEXTRAN AS A FUNCTION OF DEGREE OF POLYMERIZATION BR. J. EXP. PATHOL. 35:107-111.

(1872) ------, M. SHILO, D. S. FEINGOLD, AND B. WOLMAN. 1954. PROMOTION OF PERITONEAL INFECTION BY INTRAVENOUS LEVAN. (DEXTRAN INCLUDED.) BR. J. EXP. PATHOL. 35:112-117.

(1873) ------ AND A. M. DAVIES. 1956. BLOCKADE OF SKIN PREPARATION IN THE SHWARTZMAN PHENOMENON BY MEANS OF HIGH-POLYMER SACCHARIDES. BR. J. EXP. PATHOL. 37:235-238.

(1874) ------. 1956. EFFECT OF LEVAN AND DEXTRAN ON THE INFLAMMATORY PROCESS. ANN. N.Y. ACAD. SCI. 66(2):401-409.

(1875) JOO, I., AND L. CSIZMAS. 1957. [IMMUNOBIOLOGICAL STUDIES ON THE ACTION OF DEXTRAN PREPARATIONS ON INTESTINAL BACTERIA. I. VIRULENCE-ENHANCING EFFECT] (IN GERMAN). Z. IMMUNITAETSFORSCH. 114:215-234. ALSO IN CHEM. ABSTR. 1960. 54:22997I.

(1876) KUZNETSOVA, V. M., G. S. SEL'TSOVSKAYA, AND M. E. PREOBRAZHENSKAYA. 1967. [THE EFFECT OF VARIOUS NATIVE DEXTRANS ON NONSPECIFIC RESISTANCE TO INFECTION] (IN RUSSIAN). DOKL. AKAD. NAUK SSSR 175(2):495-497. ALSO IN CHEM. ABSTR. 1967. 67:107053C.

(1877) ------, M. E. PREOBRAZHENSKAYA, AND E. L. ROSENFEL'D. 1968. EFFECT OF MODIFIED DEXTRAN PREPARATIONS ON NONSPECIFIC RESISTANCE TO INFECTION. DOKL. AKAD. NAUK SSSR 178(2):492-495. ALSO IN CHEM. ABSTR. 1968. 68:76891R.

(1878) OLITZKI, L., M. SHELUBSKY, AND S. HESTRIN. 1946. PATHOGENIZING EFFECT OF DIFFERENT CARBOHYDRATES ON EBERTHELLA TYPHOSA. PROC. SOC. EXP. BIOL. MED. 63:491-496.

(1879) ------, M. SHELUBSKY, AND E. EFRATI. 1947. ACTION OF CERTAIN CARBOHYDRATES ON THE REACTION OF EBERTHELLA TYPHOSA WITH ANTIBODY O. PROC. SOC. EXP. BIOL. MED. 64:258-259.

(1880) PREOBRAZHENSKAYA, M. E., AND E. L. ROSENFEL'D. 1966. [STUDY OF THE BIOLOGICAL EFFECTS AND STRUCTURAL PECULIARTIES OF NATIVE DEXTRANS] (IN RUSSIAN). BIOKHIMIYA 31(5):962-968. ALSO IN BIOCHEMISTRY ENG. TRANS. 31(9):833-838.

(1881) SANFORD, J. P., O. H. GANLEY, AND E. B. PHILLIPS. 1956. THE EFFECTS OF POLYVINYLPYRROLIDONE (PVP) AND DEXTRAN ON EXPERIMENTAL CLOSTRIDIUM PERFRINGENS MYONECROSIS. ANTIBIOT. CHEMOTHER. 6:267-271.

(1882) ------, J. R. EVANS, AND J. A. PRESTON. 1956. THE INFLUENCE OF DEXTRAN ON EXPERIMENTAL INFECTIONS. J. LAB. CLIN. MED. 48:571-578.

(1883) SHILO, M., D. S. FEINGOLD, AND S. HESTRIN. 1953. PROMOTION OF INFECTION BY INTRAVENOUSLY ADMINISTERED POLYSACCHARIDES. NATURE (LONDON) 172:765-766.

(1884) ------, B. WOLMAN, AND S. HESTRIN. 1954. RESTRICTION OF INFLAMMATORY RESPONSE BY POLYSACCHARIDES. NATURE (LONDON) 174:786-787.

(1885) ------. 1963. THE INFECTION-PROMOTING ACTIVITY OF HIGH MOLECULAR WEIGHT ACIDIC MICROBIAL POLYSACCHARIDES. BULL. RES. COUNC. ISR. 11A:310-318.

(1886) SMITH, H. E., R. C. GALLOP, AND J. L. STANLEY. 1952. THE VIRULENCE-ENHANCING FACTOR OF MUCINS. 5. THE DIFFFERENT COMPONENTS OF THE 'THIRD FACTOR' INVOLVED IN VIRULENCE ENHANCEMENT. BIOCHEM. J. 52:15-23.

SEE ALSO: 281 1383 1384

I. Anaphylactoid Reaction of the Rat to Dextrans

(1887) ADAMKIEWICZ, V. W., AND Y. L. LANGLOIS. 1957. SENSITIZATION BY INSULIN TO THE DEXTRAN "ANAPHYLACTOID" REACTION. CAN. J. BIOCHEM. PHYSIOL. 35:251-256.

(1888) ------ AND L. M. ADAMKIEWICZ. 1959. ALLOXAN DIABETES AND DEXTRAN 'ANAPHYLACTOID' INFLAMMATION. AM. J. PHYSIOL. 197:377-379.

(1889) ------ AND L. M. ADAMKIEWICZ. 1960. GLUCOSE AND THE DEXTRAN ANAPHYLACTOID INFLAMMATION. AM. J. PHYSIOL. 198:51-53.

(1890) ------, R. J. FITKO, AND A. A. FORTIER. 1960. HYPOGLYCEMIC DRUGS AND THE DEXTRAN 'ANAPHYLACTOID' INFLAMMATION. CAN. J. BIOCHEM. PHYSIOL. 38:823-827.

(1891) ------. 1963. PASSIVE TRANSFER OF DEXTRAN ANAPHYLACTOID REACTION IN RATS. AM. J. PHYSIOL. 205:357-359.

(1892) ------ AND P. J. SACRA. 1967. HISTAMINE AND SUGARS. FED. PROC. 26:224-229.

(1893) ANDERSON, R., AND E. HARDENBERGH. 1964. ANAPHYLACTOID REACTION OF THE MOUSE TO DEXTRAN. PROC. SOC. EXP. BIOL. MED. 117:565-567.

(1894) ARCHER, G. T. 1959. RELEASE OF HISTAMINE FROM RAT MAST CELLS BY BLOOD TREATED WITH DEXTRAN. NATURE (LONDON) 184:1151-1152.

(1895) BERALDO, W. T., W. DIAS DA SILVA, AND A. D. L. FERNANDES. 1962. INHIBITORY EFFECTS OF CARBOHYDRATES ON HISTAMINE RELEASE AND MAST CELL DISRUPTION BY DEXTRAN. BR. J. PHARMACOL. 19:405-413.

(1896) BONACCORSI, A., AND G. B. WEST. 1963. ABSENCE OF CAPILLARY PERMEABILITY RESPONSE IN RATS TO DEXTRAN AND EGG-WHITE. J. PHARM. PHARMACOL. 15:372-378. ALSO IN CHEM. ABSTR. 1963. 59:10669H.

(1897) BRIOT, M., AND B. N. HALPERN. 1952. [SYMPTOMATOLOGY AND PATHOGENESIS OF THE EDEMATOUS SYNDROME PRODUCED BY DEXTRAN IN THE RAT] (IN FRENCH). COMPT. REND. SOC. BIOL. 146:15-20. ALSO IN CHEM. ABSTR. 1952. 46:10415I.

(1898) ------ AND B. N. HALPERN. 1952. [INHIBITING ACTION OF PHENERGAN AND ADRENALINE ON PRODUCTION OF EDEMA IN THE RAT BY DEXTRAN] (IN FRENCH). COMPT. REND. SOC. BIOL. 146:21-24. ALSO IN CHEM. ABSTR. 1952. 46:10416A.

(1899) COHEN, H., M. GRAFF, AND W. KLEINBERG. 1955. INHIBITION OF DEXTRAN EDEMA BY PROTEOLYTIC ENZYMES. PROC. EXP. BIOL. MED. 88:517-519.

(1900) CROWLE, A. J., AND C. C. HU. 1967. DELAYED HYPERSENSITIVITY IN MICE TO DEXTRAN. INT. ARCH. ALLERGY APPL. IMMUNOL. 31:123-144.

(1901) DIAS DA SILVA, W., AND A. D. L. FERNANDES. 1965. STUDY OF THE MECHANISM OF INHIBITION PRODUCED BY HEXOSES ON HISTAMINE RELEASE ACTIVITY OF DEXTRAN. EXPERIENTIA 21:96-97.

(1902) EDLUND, T., B. LOEFGREN, AND L. VAELI. 1952. TOXICITY OF DEXTRAN IN RATS. NATURE (LONDON) 170:125.

(1903) GOTH, A., W. L. NASH, M. NAGLER, AND J. HOLMAN. 1957. INHIBITION OF HISTAMINE RELEASE IN EXPERIMENTAL DIABETES. AM. J. PHYSIOL. 191:25-28.

(1904) ------ AND M. KHOOHUIZEN. 1959. INHIBITION OF ANAPHYLACTOID EDEMA IN THE RAT BY 2-DEOXY-GLUCOSE. AM. J. PHYSIOL. 197:1056-1058.

(1905) ------. 1966. MECHANISMS OF HISTAMINE RELEASE BY POLYMERIC COMPOUNDS. WENNER GREN CENT. INT. SYMP. SER. 371-378. ALSO IN CHEM. ABSTR. 1968. 69:94784H.

(1906) ------. 1967. CARBOHYDRATE METABOLISM AND HISTAMINE RELEASE. FED. PROC. 26:222-223.

(1907) GOZSY, B., AND L. KATO. 1956. OEDEMA FORMATION IN RAT'S SKIN. NATURE (LONDON) 178:1352.

(1908) ------ AND L. KATO. 1957. CHANGES IN PERMEABILITY OF THE SKIN CAPILLARIES OF RATS AFTER HISTAMINE DEPLETION WITH 48/80, DEXTRAN OR EGG WHITE. J. PHYSIOL. 139:1-9.

(1909) ------ AND L. KATO. 1957. ACTION OF RETICULO-ENDOTHELIAL-SYSTEM STIMULATORS ON THE HISTAMINE DEPLETED RATS. ARCH. INT. PHARMACODYN. 112:235-246.

(1910) ------ AND L. KATO. 1959. BEHAVIOR OF CAPILLARY ENDOTHELIUM DURING DEXTRAN INDUCED OEDEMA. EXPERIENTIA 15:391-392.

(1911) ------ AND L. KATO. 1959. HISTAMINE AND ANTIHISTAMINES IN CAPILLARY RESPONSE TO INJURY. (A REVIEW.) REV. CAN. BIOL. 18(4):310-336.

(1912) ------ AND L. KATO. 1960. MAXIMAL EDEMA INDUCED IN THE RATS BY MINUTE AMOUNTS OF DEXTRAN. REV. CAN. BIOL. 19:425-433.

(1913) ------ AND L. KATO. 1960. ACTIVATION OF CAPILLARY ENDOTHELIUM. ANN. N.Y. ACAD. SCI. 88:43-55.

(1914) ------ AND L. KATO. 1960. MECHANISM OF ACTION OF NEUROLEPTIC DRUGS. ARCH. INTERN. PHARMACODYN. 128:75-81. ALSO IN CHEM. ABSTR. 1961. 55:8664B.

(1915) ------ AND L. KATO. 1963. INVESTIGATIONS INTO THE MECHANISM OF DEXTRAN-INDUCED EDEMA IN RATS. CAN. J. BIOCHEM. PHYSIOL. 41:1855-1863.

(1916) HAINING, C. G. 1955. HISTAMINE RELEASE IN RABBIT BLOOD BY DEXTRAN AND DEXTRAN SULFATE. BR. J. PHARMACOL. 10:87-94.

(1917) HALPERN, B. N., AND M. BRIOT. 1952. [LIBERATION OF HISTAMINE BY RAT SKIN UPON CONTACT WITH DEXTRAN] (IN FRENCH). COMPT. REND. SOC. BIOL. 146:1552-1555. ALSO IN CHEM. ABSTR. 1953. 47:8246F.

(1918) ------ AND M. BRIOT. 1953. [INHIBITING ACTION OF PROMETHAZINE ON THE EFFECTS OF ALBUMIN AND DEXTRAN IN ADRENALETOMIZED RATS] (IN FRENCH). ARCH. INTERN. PHARMACODYN. 91:291-302. ALSO IN CHEM. ABSTR. 1953. 47:2351I.

(1919) ------ AND M. BRIOT. 1954. [DEPLETION OF CUTANEOUS HISTAMINE BY DEXTRAN IN THE RAT] (IN FRENCH). COMPT. REND. SOC. BIOL. 148:959-963. ALSO IN CHEM. ABSTR. 1955. 49:1953H.

(1920) ------ AND M. BRIOT. 1954. [HYPERHISTAMINEMIA PROVOKED BY INJECTION OF DEXTRAN IN THE RAT] (IN FRENCH). COMPT. REND. SOC. BIOL. 148:1046-1049. ALSO IN CHEM. ABSTR. 1955. 49:1953I.

(1921) HARRIS, J. M., AND G. B. WEST. 1963. RATS RESISTANT TO THE DEXTRAN ANAPHYLACTOID REACTION. BR. J. PHARMACOL. 20:550-562.

(1922) ------. 1963. RATS RESISTANT TO DEXTRAN AND EGG-WHITE. INT. ARCH. ALLERGY 22:109-111.

(1923) HOENE, R., P. LABBE, AND H. SELYE. 1952. A PHENOMENON OF TOPICAL PROTECTION AGAINST HYPERERGIC INFLAMMATION BY A PRECEDING LOCAL INFLAMMATION. PROC. SOC. EXP. BIOL. MED. 79:65-68.

(1924) JASMIN, G., AND P. BOIS. 1959. EFFECT OF INSULIN, FASTING AND TOLBUTAMIDE ON DEXTRAN EDEMA IN RATS. PROC. SOC. EXP. BIOL. MED. 101:656-658.

(1925) ------, P. BOIS, AND M. S. SU. 1962. SENSITIVITY OF THE RAT TO INCREASING DOSES OF DEXTRAN. CAN. J. BIOCHEM. PHYSIOL. 40:697-702.

(1926) JORI, A., A. P. BENTIVOGLIO, AND S. GARATTINI. 1961. THE MECHANISM OF THE LOCAL INFLAMMATORY REACTION INDUCED BY COMPOUND 48/80 AND DEXTRAN IN RATS. J. PHARM. PHARMACOL. 13:617-619.

(1927) KATO, L., AND B. GOZSY. 1960. KINETICS OF EDEMA FORMATION IN RATS AS INFLUENCED BY CRITICAL DOSES OF DEXTRAN. AM. J. PHYSIOL. 199:657-660.

(1928) ------ AND B. GOZSY. 1961. IMPROVED METHOD FOR QUANTITATIVE EVALUATION OF DRUG EFFECTS ON DEXTRAN EDEMA IN THE RAT. TOXICOL. APPL. PHARMACOL. 3:145-152.

(1929) ------, B. GOZSY, H. E. LEHMANN, AND T. A. BAN. 1962. ATTEMPT TO CLASSIFY PSYCHOTROPIC DRUGS, BASED ON THEIR AFFINITY TO MUCOPOLYSACCHARIDES IN VIVO. J. CLIN. EXP. PSYCHOPATHOL. 22:75-90.

(1930) ------ AND B. GOZSY. 1962. [THE ROLE OF MASTOCYTES IN THE ANAPHYLACTIC REACTION INDUCED BY DEXTRAN] (IN FRENCH). J. PHYSIOL. (PARIS) 54:619-624.

(1931) KITCHIN, H., W. Y. SMITH, G. L. WALLACE, AND OTHERS. 1954. STUDIES WITH DEXTRAN IN THE ALBINO RAT. ARCH. INT. PHARMACODYN. THER. 99(1):17-31. ALSO IN CHEM. ABSTR. 1955. 49:3389C.

(1932) MARSHALL, L. H., AND C. H. HANNA. 1958. CIRCULATORY REACTIONS OF DOGS AND RATS TO POLYVINYLPYRROLIDONE OR DEXTRAN AFTER 48/80. PROC. SOC. EXP. BIOL. MED. 97:587-590.

(1933) ------ AND C. H. HANNA. 1960. DEXTRAN AND INSULIN IN RATS. NATURE (LONDON) 187:1118.

(1934) MORRISON, J. L., A. P. RICHARDSON, AND W. L. BLOOM. 1951. THE EFFECTS OF ANTIHISTAMINIC AGENTS ON THE REACTION OF THE RAT TO DEXTRAN. ARCH. INT. PHARMACODYN. THER. 88:98-105.

(1935) POYSER, R. H., AND G. B. WEST. 1965. CHANGES IN VASCULAR PERMEABILITY PRODUCED IN RATS BY DEXTRAN OVOMUCOID AND YEAST CELL-WALL POLYSACCHARIDES. BR. J. PHARMACOL. 25:602-609.

(1936) REDEI, A., S. NAGY, AND S. KARADY. 1961. INSULIN AND THE DEXTRAN ANAPHYLACTOID REACTION. NATURWISSENSCHAFTEN 48:380-381.

(1937) RICHTER, W. 1969. INCREASED VASCULAR PERMEABILITY IN MICE INDUCED BY DEXTRAN. A COMPARISON WITH THE ANAPHYLACTOID REACTION IN RATS. ACTA PHARMACOL. TOXICOL. 27:331-348.

(1938) SCHAYER, R. W., AND R. L. SMILEY. 1954. BINDING AND RELEASE OF RADIOACTIVE HISTAMINE IN INTACT RATS. AM. J. PHYSIOL. 177:401-404.

(1939) SELYE, H. 1954. INFLUENCE OF INOCULATION SITE UPON THE COURSE OF THE ANAPHYLACTOID REACTION TO DEXTRAN. J. ALLERGY 25:97-103.

(1940) ------ AND B. TUCHWEBER. 1965. EXPERIMENTAL PRODUCTION OF AN ANAPHYLACTOID PURPURA. PROC. SOC. EXP. BIOL. MED. 118:680-682.

(1941) STUCKI, J. C., AND C. R. THOMPSON. 1958. A SCREENING PROCEDURE FOR SUBSTANCES WHICH INHIBIT DEXTRAN EDEMA IN THE RAT. AM. J. PHYSIOL. 193:275-282.

(1942) SWINGLE, W. W., E. J. FEDOR, R. MAXWELL, AND OTHERS. 1953. CORTISONE FORE-TREATMENT OF ADRENALECTOMIZED RATS INFUSED WITH GLOBIN AND DEXTRAN. AM. J. PHYSIOL. 172:527-534.

(1943) ------, E. J. FEDOR, M. BEN, AND OTHERS. 1953. PROTECTION AFFORDED BY AQUEOUS-ALCOHOL SOLUTIONS OF CORTISONE AGAINST DEXTRAN. PROC. SOC. EXP. BIOL. MED. 84:63-65.

(1944) TIMSIT, J., AND J. P. GIROUD. 1971. ANTI-INFLAMMATORY AND ANTICOMPLEMENT PROPERTIES OF DEXTRANS OF VARIOUS MOLECULAR WEIGHTS. COMPT. REND. SOC. BIOL. 165:268-273.

(1945) UYEKI, E. M., R. S. KLASSEN, AND V. LLACER. 1969. ANALYSIS OF DEXTRAN- AND METHYLATED ALBUMIN-INDUCED HYPERSENSITIVITY BY MOUSE PAW SWELLING. PROC. SOC. EXP. BIOL. MED. 132:1140-1146.

(1946) VOORHEES, A. B., H. J. BAKER, AND E. J. PULASKI. 1951. REACTIONS OF ALBINO RATS TO INJECTIONS OF DEXTRAN. PROC. SOC. EXP. BIOL. MED. 76:254-256.

(1947) WALTON, R. P., A. L. HAUCK, AND E. H. HERMAN. 1966. STRUCTURAL SPECIFICITY OF DEXTRAN IN PRODUCING ANAPHYLACTOID REACTIONS IN RATS. PROC. SOC. EXP. BIOL. MED. 121:272-274.

(1948) WEST, G. B., AND J. M. HARRIS. 1964. PHARMACOGENETICS; A FRESH APPROACH TO THE PROBLEMS OF ALLERGY. ANN. N.Y. ACAD. SCI. 118:441-452.

J. Miscellaneous

Relating to univalent and Rh antibodies.

(1949) BONNEL, P. H. 1951. [USE OF DEXTRAN FOR RESEARCH ON UNIVALENT RH ANTIBODIES] (IN FRENCH). REV. HEMATOL. 6:95-100.

(1950) GRUBB, R. 1949. DEXTRAN AS MEDIUM FOR DEMONSTRATION OF INCOMPLETE ANTI-RH-AGGLUTININS. J. CLIN. PATHOL. (LONDON) 2:223-224.

(1951) JONES, A. R. 1950. DEXTRAN AS A DILUENT FOR UNIVALENT ANTIBODIES. NATURE (LONDON) 165:118-119.

SEE ALSO: 2216 2224 2238

XX. Metabolism and distribution in the body

A. Infused

Metabolism, distribution in organs and tissues, and elimination; effect of structure and molecular weight.

(1952) ABERG, B., W. L. BLOOM, AND E. HANSSON. 1961. GASTRO-INTESTINAL EXCRETION OF DEXTRAN-C-14. ACTA PHYSIOL. SCAND. 52:188-194.

(1953) ANONYMOUS. 1953. METABOLISM OF THE PLASMA EXPANDERS DEXTRAN AND POLYVINYL PYRROLIDONE. (ALSO REFERENCES CITED.) NUTR. REV. 11:281-284.

(1954) ------. 1955. METABOLIC CHANGES PRODUCED BY DEXTRAN. NUTR. REV. 13:230-232.

(1955) BIENENGRAEBER, A., K. H. NAGEL, AND B. ERNST. 1970. SPECIFIC DEMONSTRATION OF DEXTRAN BY FLUORESCENCE LABELING. NEW FINDINGS IN STORAGE AND DISTRIBUTION OF DEXTRAN IN THE BODY OF RATS. EXP. PATHOL. 4(2-3):168-181.

(1956) BLOOM, W. L. 1956. DISPOSITION OF DEXTRAN FOLLOWING INTRAVENOUS INJECTION. J. LAB. CLIN. MED. 47:938-949.

(1957) BOLLMAN, J. L. 1953. EXTRAVASCULAR DIFFUSION OF DEXTRAN FROM BLOOD. J. LAB. CLIN. MED. 41:421-427.

(1958) BOURRILLON, R., AND M. STOLIAROFF. 1953. [FATE OF DEXTRAN INJECTED INTO THE BODY] (IN FRENCH). COMPT. REND. SOC. BIOL. 147:241-244. ALSO IN CHEM. ABSTR. 1954. 48:8691.

(1959) BURSON, N., AND W. L. BLOOM. 1951. STUDIES ON THE GASTRO-INTESTINAL EXCRETION OF DEXTRAN. AM. J. MED. 11:618-

(1960) CARGILL, W. H., AND H. D. BRUNER. 1951. METABOLISM OF C14-LABELED DEXTRAN IN THE MOUSE. (AN ABSTRACT.] J. PHARMACOL. EXP. THER. 103:339.

(1961) CHYTIL, F., L. LACKO, AND O. STERBA. 1966. AN ENZYME SPLITTING DEXTRAN IN DOG SERUM. BLUT 12:310-313.

(1962) DAEMS, W. T., AND T. G. VAN RIJSSEL. 1961. THE FINE STRUCTURE OF THE PERIBILIARY DENSE BODIES IN MOUSE LIVER TISSUE. J. ULTRASTRUCT. RES. 5:263-290. ALSO IN BIOL. ABSTR. 1961. 78905.

(1963) DIAMANTSTEIN, T., AND H. EHRHART. 1962. [CAUSE OF DEXTRAN RETENTION IN THE RAT] (IN GERMAN). (ALSO MODE OF DEGRADATION AND EXCRETION.) KLIN. WOCHENSCHR. 40:486-487. ALSO IN CHEM. ABSTR. 1962. 57:6558G.

(1964) EBERT, K. H., G. SCHENK, AND R. SCHOLZ. 1968. FATE OF INJECTED DEXTRAN IN THE GUINEA PIG. Z. KLIN. CHEM. KLIN. BIOCHEM. 6(5):435-441. ALSO IN CHEM. ABSTR. 1969. 70:35990V.

(1965) ------, G. SCHENK, AND R. SCHOLZ. 1970. [FATE OF DEXTRAN IN GUINEA PIG ORGANS] (IN GERMAN). NUCL. MED. SUPPL. 8:367. ALSO IN CHEM. ABSTR. 1971. 75:47085V.

(1966) ENGSTRAND, L., AND B. ABERG. 1950. EXCRETION OF INTRAVENOUSLY ADMINISTERED DEXTRAN. LANCET 258:1071-1073.

(1967) FARROW, S. P., AND C. R. RICKETTS. 1971. BLOCKING OF RETICULOENDOTHELIAL CELLS BY DEXTRAN. J. PHARM. PHARMACOL. 23:295-297. ALSO IN CHEM. ABSTR. 1971. 75:3745F.

(1968) FEKETE, G., L. GYERMEK, AND I. LAZAR. 1955. STUDIES ON THE STORAGE OF DEXTRAN. ACTA PHYSIOL. ACAD. SCI. HUNG. 8:147-153. ALSO IN CHEM. ABSTR. 1956. 50:6621E.

(1969) FRIBERG, U., W. GRAF, AND B. ABERG. 1951. ON THE HISTOCHEMISTRY OF PARTLY HYDROLYSED, BACTERIAL DEXTRAN. SCAND. J. CLIN. LAB. INVEST. 3:221-227.

(1970) GABLER, G., AND F. JUNG. 1960. [ELECTRON MICROSCOPIC INVESTIGATIONS INTO THE MORPHOLOGY OF MACROMOLECULAR SUBSTANCE (DEXTRAN, PERISTON) STORED IN THE SPLEEN] (IN GERMAN). ACTA BIOL. MED. GER. 4:492-500. ALSO IN CHEM. ABSTR. 1960. 54:21503.

(1971) GOLDENBERG, M., R. D. CRANE, AND H. L. POPPER. 1947. EFFECT OF INTRAVENOUS ADMINISTRATION OF DEXTRAN, A MACROMOLECULAR CARBOHYDRATE, IN ANIMALS. AM. J. CLIN. PATHOL. 17:939-948.

(1972) GRAY, I., P. K. SIITERI, AND E. J. PULASKI. 1951. METABOLISM OF PLASMA SUBSTITUTE. I. DEXTRAN (MACRODEX). PROC. SOC. EXP. BIOL. MED. 77:626-627.

(1973) ------. 1953. METABOLISM OF PLASMA EXPANDERS STUDIED WITH CARBON-14-LABELLED DEXTRAN. AM. J. PHYSIIOL. 174:462-466.

(1974) GROENWALL, A., AND K. WIKSTROEM. 1953. ON THE OCCURRENCE OF DEXTRAN IN THE GASTROINTESTINAL TRACT AFTER INTRAVENOUS INFUSION OF DEXTRAN SOLUTIONS (MACRODEX). ACTA SOC. MED. UPS. 59:24-32.

(1975) HANNGREN, A., E. HANSSON, S. ULLBERG, AND B. ABERG. 1959. FATE OF INJECTED DEXTRAN LABELLED WITH TRITIUM IN MICE. NATURE (LONDON) 184:373-374.

(1976) HARTMAN, F. W. 1952. FATE AND DISPOSAL OF PLASMA SUBSTITUTES. ANN. N.Y. ACAD. SCI. 55(3):504-512.

(1977) HIERHOLZER, G., J. REHN, AND H. P. HARRFELDT. 1967. [INFLUENCE OF DEXTRAN INFUSION ON CARBOHYDRATE METABOLISM. I] (IN GERMAN). LANGENBECKS ARCH. KLIN. CHIR. 317(2):89-95. ALSO IN CHEM. ABSTR. 1967. 67:20510C.

(1978) HUSEMANN, E., AND G. SODER. 1954. [THE EXCRETION AND STORAGE OF DEXTRAN AS INDICATED WITH S-35] (IN GERMAN). Z. NATURFORSCH. 9B:237-239. ALSO IN CHEM. ABSTR. 1954. 48:8965I.

(1979) JASMIN, G., AND A. BONIN. 1961. HISTOCHEMICAL DEMONSTRATION OF DEXTRAN INJECTED INTO RATS. J. HISTOCHEM. CYTOCHEM. 9:104-105. ALSO IN BIOL. ABSTR. 1961. 36:34416.

(1980) LINDNER, H. 1955. [FATE OF DEXTRAN IN THE HUMAN BODY] (IN GERMAN). VERH. DTSCH. GES. PATHOL. 38:162-172. ALSO IN CHEM. ZENTR. 1959. 130:12611.

(1981) ------. 1956. [THE SIGNIFICANCE AND FATE OF MACROMOLECULAR SUBSTANCES IN MAN WITH SPECIAL REFERENCE TO DEXTRAN] (IN GERMAN). AERZTL. FORSCH. 10:275-298.

(1982) ------. 1959. [METABOLISM OF DEXTRAN AS SEEN BY A PATHOLOGIST] (IN GERMAN). ANAESTHESIST 8:55-63. ALSO IN CHEM. ABSTR. 1959. 53:11629D.

(1983) ------. 1971. [MORPHOLOGY] (IN GERMAN). (FATE OF PLASMA EXPANDERS.) BIBL. HAEMATOL. 37:279-298.

(1984) MEIJER, A. E. F. H. 1962. ENLARGEMENT OF THE LIVER AND SPLEEN IN MICE OF THE O(20) (AMSTERDAM) STRAIN CAUSED BY STORAGE OF MACROMOLECULAR SUBSTANCES. I. THE STORAGE OF THE MACROMOLECULAR SUBSTANCES DEXTRAN AND POLY(VINYLPYRROLIDINONE) IN THE LIVER AND SPLEEN. BIOCHEM. PHARMACOL. 11:1137-1140. ALSO IN CHEM. ABSTR. 1963. 58:6048B.

(1985) MOWRY, R. W., AND R. C. MILLICAN. 1953. A HISTOCHEMICAL STUDY OF THE DISTRIBUTION AND FATE OF DEXTRAN IN TISSUES OF THE MOUSE. AM. J. PATHOL. 29:523-545.

(1986) PERSSON, B. H. 1952. HISTOCHEMICAL STUDIES ON THE FATE OF PARENTERALLY ADMINISTERED DEXTRAN IN RABBITS. I. DEMONSTRATION OF DEXTRAN IN TISSUE SECTIONS. ACTA SOC. MED. UPS. 57:411-420.

(1987) ------. 1952. HISTOCHEMICAL STUDIES ON THE FATE OF PARENTERALLY ADMINISTERED DEXTRAN IN RABBITS. II. ON THE ACCUMULATION OF DEXTRAN WITHIN THE KIDNEY, LIVER, LEUCOCYTES AND RETICULO-ENDOTHELIAL SYSTEM. ACTA SOC. MED. UPS. 57:421-437.

(1988) ------. 1952. DISTRIBUTION OF DEXTRAN IN THE TISSUES OF RABBITS. NATURE (LONDON) 170:716-718.

(1989) SAENKO, A. S. 1964. [INVESTIGATION OF DEXTRAN METABOLISM IN LIVER] (IN RUSSIAN). VOPR. MED. KHIM. 10(1):36. ALSO IN FED. PROC. TRANS. SUPPL. 1965. 24(2):T206-T208.

(1990) SCHMITZ, H. 1951. [ON THE FATE OF MACRODEX IN THE BODY] (IN GERMAN). KLIN. WOCHENSCHR. 29:424-425.

(1991) SEMPLE, R. E., B. J. EXCELL, AND J. K. N. JONES. 1956. CHANGES IN CERTAIN CHARACTERISTICS OF DEXTRAN AS A RESULT OF METABOLIC ACTIVITY IN DOGS [AN ABSTRACT]. XXTH INT. PHYSIOLOG. CONGR. BRUSSELS, P. 820.

(1992) SWEDIN, B., AND B. ABERG. 1952. ON DEXTRAN IN SPLEEN, LIVER AND MUSCLE AFTER INTRAVENOUS INJECTION INTO RABBITS. SCAND. J. CLIN. LAB. INVEST. 4:68-70.

(1993) TERRY, R., C. L. YUILE, A. GOLODETZ, C. E. PHILLIPS, AND R. R. WHITE. 1953. METABOLISM OF DEXTRAN; A PLASMA VOLUME EXPANDER; STUDIES OF RADIOACTIVE CARBON-LABELLED DEXTRAN IN DOGS. J. LAB. CLIN. MED. 42:6-15.

(1994) TROELL, L., AND B. ABERG. 1952. THE CARBOHYDRATE CONTENT OF THE GASTRIC JUICE AFTER INTRAVENOUS ADMINISTRATION OF PARTLY HYDROLYZED, BACTERIAL DEXTRAN. SCAND. J. CLIN. LAB. INVEST. 4:355-358. ALSO IN CHEM. ABSTR. 1953. 47:3471C.

(1995) TURNER, P. A., AND W. D'A. MAYCOCK. 1958. DISTRIBUTION OF INJECTED DEXTRAN IN THE MOUSE. J. PATHOL. BACTERIOL. 75:145-150.

(1996) VICKERY, A. L. 1956. THE FATE OF DEXTRAN IN TISSUES OF THE ACUTELY WOUNDED. A STUDY OF THE HISTOLOGIC LOCALIZATION OF DEXTRAN IN TISSUES OF KOREAN BATTLE CASUALTIES. (AND OTHER REFERENCES ON METABOLISM CITED.) AM. J. PATHOL. 32:161-178.

SEE ALSO: 135 137 1053 2136

B. Ingested

Breakdown, where and how effected.

Dextran-degrading enzymes in tissues other than intestinal mucosa (action on infused or ingested).

(1997) ABERG, B. 1953. BREAKDOWN OF DEXTRAN BY HUMAN FECES. SCAND. J. CLIN. LAB. INVEST. 5:37-38.

(1998) AMMON, R. 1963. [THE OCCURRENCE OF DEXTRANASE IN HUMAN TISSUES] (IN GERMAN). ENZYMOLOGIA 25:245-251.

(1999) AURICCHIO, F., AND C. B. BRUNI. 1967. PURIFICATION OF AN ACID ALPHA-GLUCOSIDASE BY DEXTRAN GEL FILTRATION. BIOCHEM. J. 105:35-38.

(2000) BLOOM, W. L., AND A. E. WILHELMI. 1952. DEXTRAN AS A SOURCE OF LIVER GLYCOGEN AND BLOOD REDUCING SUBSTANCE. PROC. SOC. EXP. BIOL. MED. 81:501-503.

(2001) BOOTH, A. N., A. P. HENDRICKSON, AND F. DE EDS. 1963. PHYSIOLOGIC EFFECTS OF THREE MICROBIAL POLYSACCHARIDES ON RATS. TOXICOL. APPLIED PHARMACOL. 5:478-484.

(2002) FISCHER, E. H., AND E. A. STEIN. 1960. DEXTRANASES: A. MOLD DEXTRANASES; B. BACTERIAL DEXTRANASES; C. DEXTRANASES FROM MAMMALIAN TISSUE. IN P. D. BOYER, H. LARDY, AND K. MYBAECK, EDS. THE ENZYMES, 4 PART A, PP. 304-307. ACADEMIC PRESS, INC., NEW YORK.

(2003) FOOD AND DRUG ADMINISTRATION. 1974. SCIENTIFIC LITERATURE REVIEWS ON GENERALLY RECOGNIZED AS SAFE (GRAS) FOOD INGREDIENTS - DEXTRANS. (A SUMMARY OF SCIENTIFIC LITERATURE FROM 1920 TO 1974 RELATED TO THE SAFETY OF DEXTRANS AS FOOD INGREDIENTS.) U.S. N.T.I.S. PB REP. 234-889.

(2004) HEHRE, E. J., AND T. W. SERY. 1952. DEXTRAN SPLITTING ANAEROBIC BACTERIA FROM THE HUMAN INTESTINE. J. BACTERIOL. 63:424-426.

(2005) LUKOMSKAYA, I. S. 1962. [THE SPLITTING OF TREHALOSE, KOJIBIOSE, NIGEROSE, MALTOSE AND ISOMALTOSE BY LIVER ENZYMES] (IN RUSSIAN). BIOKHIMIYA 27:875-881. ALSO IN BIOCHEMISTRY ENGL. TRANS. 1963. 27(5):741-746.

(2006) MINAKOVA, A. L., M. E. PREOBRAZHENSKAYA, AND E. L. ROSENFEL'D. 1975. [DEXTRANGLUCOSIDASE ACTIVITY OF ACID ALPHA-GLUCOSIDASE FROM PIG SPLEEN] (IN RUSSIAN). BIOKHIMIYA 40(1):127-136. ALSO IN CHEM. ABSTR. 1975. 83:3412K.

(2007) PARKINSON, T. M. 1967. METABOLISM OF ORALLY ADMINISTERED DEXTRAN AND 'SEPHADEX' DERIVATIVES IN THE RAT. NATURE (LONDON) 215:415-416.

(2008) ------. 1967. HYPOLIPIDEMIC EFFECTS OF ORALLY ADMINISTERED DEXTRAN AND CELLULOSE ANION EXCHANGERS IN COCKERELS AND DOGS. J. LIPID RES. 8:24-29.

(2009) PERSSON, B. H. 1952. HISTOCHEMICAL STUDIES ON THE FATE OF PARENTERALLY ADMINISTERED DEXTRAN IN RABBITS. 2. ON THE ACCUMULATION OF DEXTRAN WITHIN THE KIDNEY, LIVER, LEUCOCYTES AND RETICULO-ENDOTHELIAL SYSTEM. ACTA SOC. MED. UPS. 57(5-6):421-437.

(2010) PREOBRAZHENSKAYA, M. E., AND E. L. ROSENFEL'D. 1970. [DEGRADATION OF NATIVE DEXTRANS BY THE DEXTRAN GLUCOSIDASE FROM ANIMAL TISSUES AND THE EFFECT OF CONCANAVALIN A ON THIS PROCESS] (IN RUSSIAN). BIOKHIMIYA 35(4):743-758. ALSO IN BIOCHEMISTRY ENGL. TRANS. 35(4, PART 2):662-666.

(2011) ------ AND E. L. ROSENFEL'D. 1972. [ISOLATION OF HIGHLY PURIFIED ACID ALPHA-GLUCOSIDASE PREPARATIONS FROM PIG SPLEEN AND ITS EFFECT ON NATIVE DEXTRANS] (IN RUSSIAN). BIOKHIMIYA 37(5):974-982. ALSO IN BIOCHEMISTRY ENGL. TRANS. 37(5, PART 1):815-821.

(2012) ------, A. L. MINAKOVA, AND E. L. ROSENFEL'D. 1974. STUDIES OF THE DEXTRANASE ACTIVITY OF PIG-SPLEEN ACID ALPHA-D-GLUCOSIDASE. CARBOHYDR. RES. 38:267-277.

(2013) ROSENFEL'D, E. L., A. I. SHUBINA, AND A. A. KUZNETZOFF. 1955. [CLEAVAGE OF DEXTRAN BY SPLEEN EXTRACTS] (IN RUSSIAN). DOKL. AKAD. NAUK SSSR 104:115-117.

(2014) ------. 1956. [ENZYMATIC DEGRADATION OF DEXTRAN BY SPLEEN EXTRACTS] (IN RUSSIAN). BIOKHIMIYA 21:84-89. ALSO IN BIOCHEMISTRY ENGL. TRANS. 21:77-82.

(2015) ------ AND I. S. LUKOMSKAYA. 1956. [SPLITTING OF 1:6 LINKAGES IN DEXTRAN BY ANIMAL TISSUES] (IN RUSSIAN). BIOKHIMIYA 21:412-415. ALSO IN BIOCHEMISTRY ENGL. TRANS. 21:415-417.

(2016) ------ AND I. S. LIKOMSKAYA. 1957. THE SPLITTING OF DEXTRAN AND ISOMALTOSE BY ANIMAL TISSUE. CLIN. CHIM. ACTA 2:105-114. ALSO IN CHEM. ABSTR. 1957. 51:14866G.

(2017) ------, I. S. LUKOMSKAYA, N. K. RUDAKOVA, AND A. I. SHUBINA. 1959. [A STUDY OF ALPHA-1,6-POLYGLUCOSIDES OF ANIMAL TISSUES] (IN RUSSIAN). BIOKHIMIYA 24:1047-1053. ALSO IN CHEM. ABSTR. 1960. 54:13202F.

(2018) ------ AND A. S. SAENKO. 1963. [THE SPLITTING OF DEXTRAN BY ALPHA-1,6-DEXTRAN GLUCOSIDASE OF THE LIVER IN VIVO] (IN RUSSIAN). BIOKHIMIYA 28:552-557. ALSO IN BIOCHEMISTRY ENGL. TRANS. 28(3):447-451.

(2019) ------. 1964. [DEXTRAN AND ITS CONVERSIONS] (IN RUSSIAN). NAUKA ZHIZN 1962(4):25. ALSO IN CHEM. ABSTR. 57:9726A.

(2020) ------ AND A. S. SAENKO. 1964. METABOLISM IN VIVO OF CLINICAL DEXTRAN. CLIN. CHIM. ACTA 10:223-228. ALSO IN CHEM. ABSTR. 1964. 61:15194B.

(2021) ------. 1964. ANIMAL TISSUE GAMMA-AMYLASE AND ITS ROLE IN THE METABOLISM OF GLYCOGEN. IN W. J. WHELAN AND M. P. CAMERON, EDS. CONTROL OF GLYCOGEN METABOLISM, PP. 176-192. LITTLE, BROWN AND CO., BOSTON, MASS.

(2022) RUTTLOFF, H., R. FRIESE, AND K. TAEUFEL. 1964. [THE ENZYMIC CLEAVAGE OF LEUCROSE] (IN GERMAN). NATURWISSENSCHAFTEN 51(7):163.

(2023) SAENKO, A. S. 1963. [ALPHA-1,6-DEXTRAN GLUCOSIDASE IN HUMAN ORGANS] (IN RUSSIAN). PROBL. GEMATOL. PERELIV. KROVI 8(8):57-59. ALSO IN CHEM. ABSTR. 1964. 60:2125F.

(2024) SCHMIDT, W., V. STEINERT, AND G. KLAPPACH. 1966. [THE THERAPEUTIC USE OF DEXTRAN IN ILEUS (INTESTINAL OBSTRUCTION] (IN GERMAN). PHARMAZIE 21(5):304-307. ALSO IN CHEM. ABSTR. 1966. 65:9581E.

(2025) SERY, T. W., AND E. J. HEHRE. 1956. DEGRADATION OF DEXTRANS BY ENZYMES OF INTESTINAL BACTERIA. J. BACTERIOL. 71:373-380.

(2026) TOLMACHEV, V. N., Z. A. LUGOVAYA, T. M. MARTIROSYAN, AND OTHERS. 1975. [INTERACTION OF DEXTRAN WITH COPPER, COBALT, AND NICKEL IONS IN SOLUTION] (IN RUSSIAN). (RELATION TO NUTRITIVE AVAILABILITY.) VYSOKOMOL. SOEDIN. SER. B 17(10):756-758. ALSO IN CHEM. ABSTR. 1976. 84:22808F.

(2027) TORRES, H. N., AND J. M. OLAVARRIA. 1964. LIVER-ALPHA-GLUCOSIDASES. J. BIOL. CHEM. 239:2427-2434.

(2028) USHAKOVA, N. A., AND I. S. LUKOMSKAYA. 1971. [SPECIFICITY OF THE ACTION OF NEUTRAL ALPHA-OLIGOGLUCOSIDASES FROM RABBIT LIVER] (IN RUSSIAN). DOKL. AKAD. NAUK SSSR 199:719-721. ALSO IN CHEM. ABSTR. 1971. 75:137115J.

(2029) VOELKER, R. 1963. [SUSTAINED ACTION OF ORALLY ADMINISTERED DEXTRAN] (IN GERMAN). ARZNEIM. FORSCH. 13:76-77.

(2030) VOHRA, P., AND F. H. KRATZER. 1964. GROWTH INHIBITORY EFFECT OF CERTAIN POLYSACCHARIDES FOR CHICKENS. POULTRY SCI. 43:1164-1170.

SEE ALSO: 1655 1958 1994

C. Metabolism of Dextran and Isomaltose in Intestinal Tract

Enzymes of intestinal mucosa: occurrence, isolation, characterization, and assay; disaccharide intolerance resulting from disaccharidase deficiency.

(2031) ADROUNY, G. A., W. L. BLOOM, AND A. E. WILHELMI. 1957. A DEXTRAN-HYDROLYZING ENZYME FROM INTESTINAL MUCOSA [ABSTRACT 618]. FED. PROC. 16(1):143.

(2032) ANDERSON, C. M., M. MESSER, R. R. W. TOWNLEY, AND OTHERS. 1962. INTESTINAL ISOMALTASE DEFICIENCY IN PATIENTS WITH HEREDITARY SUCROSE AND STARCH INTOLERANCE. LANCET 2:556-557.

(2033) AURICCHIO, S., A. PRADER, G. MUERSET, AND G. WITT. 1961. [SACCHAROSE INTOLERANCE DIARRHEA DUE TO HEREDITARY DEFICIENCY OF INTESTINAL SACCHARASE ACTIVITY] (IN GERMAN). HELV. PAEDIAT. ACTA 16:483-505.

(2034) ------, A. DAHLQVIST, G. MUERSET, AND A. PRADER. 1963. ISOMALTOSE INTOLERANCE CAUSING DECREASED ABILITY TO UTILIZE DIETARY STARCH. J. PEDIATR. 62:165-176.

(2035) ------, A. RUBINO, R. TOSI, AND OTHERS. 1963. DISACCHARIDASE ACTIVITIES IN HUMAN INTESTINAL MUCOSA. ENZYMOL. BIOL. CLIN. 3:193-208.

(2036) ------, A. RUBINO, A. PRADER, AND OTHERS. 1964. INTESTINAL DISACCHARIDASE ACTIVITY IN CONGENITAL MALABSORPTION OF SUCROSE AND ISOMALTOSE. LANCET 2:914-915.

(2037) ------, G. SEMENZA, AND A. RUBINO. 1965. MULTIPLICITY OF HUMAN INTESTINAL DISACCHARIDASES. II. CHARACTERIZATION OF THE INDIVIDUAL MALTASES. BIOCHIM. BIOPHYS. ACTA 96:498-507.

(2038) ------, D. D. PIETRA, AND A. VEGNENTE. 1967. STUDIES ON INTESTINAL DIGESTION OF STARCH IN MAN. II. INTESTINAL HYDROLYSIS OF AMYLOPECTIN IN INFANTS AND CHILDREN. PEDIATRICS 39:853-862.

(2039) BARRATT, T. M., AND A. A. MONCRIEFF. 1964. SUCROSE AND ISOMALTOSE INTOLERANCE IN (TWO) SIBLINGS. PROC. ROY. SOC. MED. 57:838-840.

(2040) BURAND, P., AND G. M. LAMEDICA. 1963. DIACCHARIDE INTOLERANCE. HELV. PAEDIAT. ACTA 17(6):395-410. ALSO IN CHEM. ABSTR. 1964. 60:3351H.

(2041) COGOLI, A., H. MOSIMANN, C. VOCK, AND OTHERS. 1972. A SIMPLIFIED PROCEDURE FOR THE ISOLATION OF THE SUCRASE:ISOMMALTASE COMPLEX FROM RABBIT INTESTINE. ITS AMINO-ACID AND SUGAR COMPOSITION. EUR. J. BIOCHEM. 30:7-14.

(2042) ------, A. EBERLE, H. SIGRIST, AND OTHERS. 1973. SUBUNITS OF THE SMALL-INTESTINAL SUCRASE:ISOMALTASE COMPLEX AND SEPARATION OF ITS ENZYMATICALLY ACTIVE ISOMALTASE MOIETY. EUR. J. BIOCHEM. 33:40-48.

(2043) ------ AND G. SEMENZA. 1975. PROBABLE OXOCARBONIUM ION IN THE REACTION MECHANISM OF SMALL INTESTINAL SUCRASE AND ISOMALTASE. J. BIOL. CHEM. 250:7802-7809.

(2044) CONKLIN, K. A., K. M. YAMASHIRO, AND G. M. GRAY. 1975. HUMAN INTESTINAL SUCRASE-ISOMALTASE: IDENTIFICATION OF FREE SUCRASE AND ISOMALTASE AND CLEAVAGE OF THE HYBRID INTO ACTIVE DISTINCT SUBUNITS. J. BIOL. CHEM. 250:5735-5741.

(2045) CRANE, R. K. 1975. THE PHYSIOLOGY OF THE INTESTINAL ABSORPTION OF SUGARS. ACS SYMP. SER. 15:2-19.

(2046) CUMMINS, D. L., R. GITZELMANN, J. LINDENMANN, AND G. SEMENZA. 1968. IMMUNOCHEMICAL STUDY OF ISOLATED HUMAN AND RABBIT INTESTINAL SUCRASE. BIOCHIM. BIOPHYS. ACTA 160:396-403.

(2047) DAHLQVIST, A. 1959. SPECIFICITY OF A PURIFIED HOG INTESTINAL MALTASE ACTIVITY BY OTHER SUBSTRATES. ACTA CHEM. SCAND. 13:2156-2158.

(2048) ------. 1960. HOG INTESTINAL ALPHA-GLUCOSIDASES. SOLUBILIZATION, SEPARATION AND CHARACTERIZATION. HAKAN OHLSSONS, BOKTRYCKERIET, LUND.

(2049) ------. 1960. HOG INTESTINAL ISOMALTASE ACTIVITY. ACTA CHEM. SCAND. 14:72-80.

(2050) ------. 1961. INTESTINAL CARBOHYDRASES OF A NEW BORN PIG. NATURE (LONDON) 190:31-32.

(2051) ------. 1961. THE LOCATION OF CARBOHYDRASES IN THE DIGESTIVE TRACT OF THE PIGS. BIOCHEM. J. 78:282-288.

(2052) ------. 1961. HYDROLYSIS OF PALATINOSE (ISOMALTULOSE) BY PIG INTESTINAL GLYCOSIDASES. ACTA CHEM. SCAND. 15:808-816.

(2053) ------. 1961. DETERMINATION OF MALTASE AND ISOMALTASE ACTIVITIES WITH A GLUCOSE-OXIDASE REAGENT. BIOCHEM. J. 80:547-551.

(2054) ------. 1962. SPECIFICITY OF THE HUMAN INTESTINAL DISACCHARIDASES AND IMPLICATIONS FOR HEREDITARY DISACCHARIDE INTOLERANCE. J. CLIN. INVEST. 41:463-470.

(2055) ------ AND D. THOMSON. 1963. SEPARATION AND CHARACTERIZATION OF TWO RAT-INTESTINAL AMYLASES. (DIFFERENTIATION FROM ISOMALTASE.) BIOCHEM. J. 89:272-277.

(2056) ------, S. AURICCHIO, G. SEMENZA, AND A. PRADER. 1963. HUMAN INTESTINAL DISACCHARIDASES AND HEREDITARY DISACCHARIDE INTOLERANCE: THE HYDROLYSIS OF SUCROSE, ISOMALTOSE, PALATINOSE (ISOMALTULOSE), AND A 1,6-ALPHA-OLIGOSACCHARIDE (ISOMALTO-OLIGOSACCHARIDE) PREPARATION. J. CLIN. INVEST. 42:556-562.

(2057) ------. 1963. RAT-INTESTINAL DEXTRANASE: LOCALIZATION AND RELATION TO THE OTHER CARBOHYDRASES OF THE DIGESTIVE TRACT. BIOCHEM. J. 86:72-76.

(2058) ------. 1964. METHOD FOR ASSAY OF INTESTINAL DISACCHARIDASES. ANAL. BIOCHEM. 7:18-25.

(2059) ------. 1964. INTESTINAL HYDROLYSIS AND ABSORPTION OF GLYCOGEN-DERIVED OLIGOSACCHARIDES. IN W. J. WHELAN AND M. P. CAMERON, EDS. CONTROL OF GLYCOGEN METABOLISM, PP. 53-67. LITTLE, BROWN AND CO., BOSTON, MASS.

(2060) ------. 1964. INTESTINAL DISACCHARIDASES. (A REVIEW.) DISORD. INTEST. DEFECTIVE CARBOHYDR. DIG. ABSORPT. 5-55.

(2061) ------ AND C. NORDSTROEM. 1966. THE DISTRIBUTION OF DISACCHARIDASE ACTIVITIES IN THE VILLI AND CRYPTS OF THE SMALL-INTESTINAL MUCOSA. BIOCHIM. BIOPHYS. ACTA 113:624-626.

(2062) ------. 1966. INTESTINAL DISACCHARIDASES. METHODS ENZYMOL. 8:584-591.

(2063) ------. 1966. DISACCHARIDE INTOLERANCE. (A REVIEW.) J. AM. MED. ASSOC. 195:225-227.

(2064) ------. 1967. [INTESTINAL DISACCHARIDASES AND DISACCHARIDE INTOLERANCE] (IN FRENCH). (A REVIEW.) BULL. SOC. CHIM. BIOL. 49:1635-1646.

(2065) ------. 1968. ASSAY OF INTESTINAL DISACCHARIDASES. ANAL. BIOCHEM. 22:99-107.

(2066) ------ AND U. TELENIUS. 1969. COLUMN CHROMATOGRAPHY OF HUMAN SMALL-INTESTINAL MALTASE, ISOMALTASE AND INVERTASE ACTIVITIES. BIOCHEM. J. 111:139-146.

(2067) DUBS, R., B. STEINMANN, AND R. GITZELMANN. 1973. DEMONSTRATION OF AN INACTIVE ENZYME ANTIGEN IN SUCRASE-ISOMALTASE DEFICIENCY. HELV. PAEDIAT. ACTA 28:187-198.

(2068) ------, R. GITZELMANN, B. STEINMANN, AND J. LINDENMANN. 1975. CATALYTICALLY INACTIVE SUCRASE ANTIGEN OF RABBIT SMALL INTESTINE: THE ENZYME PRECURSOR. HELV. PAEDIAT. ACTA 30:89-102.

(2069) EGGERMONT, E. 1969. THE HYDROLYSIS OF THE NATURALLY OCURRING ALPHA-GLUCOSIDES BY THE HUMAN INTESTINAL MUCOSA. EUR. J. BIOCHEM. 9:483-487.

(2070) ------ AND H. G. HERS. 1969. THE SEDIMENTATION PROPERTIES OF THE INTESTINAL ALPHA-GLUCOSIDASES OF NORMAL HUMAN SUBJECTS AND OF PATIENTS WITH SUCROSE INTOLERANCE. EUR. J. BIOCHEM. 9:488-496.

(2071) EICHHOLZ, A. 1967. STRUCTURAL AND FUNCTIONAL ORGANIZATION OF THE BRUSH BORDER OF INTESTINAL EPITHELIAL CELLS. III. ENZYMIC ACTIVITIES AND CHEMICAL COMPOSITION OF VARIOUS FRACTIONS OF TRIS-DISRUPTED BRUSH BORDERS. BIOCHIM. BIOPHYS. ACTA 135:475-482.

(2072) GITZELMANN, R., E. A. DAVIDSON, AND J. OSINCHAK. 1964. DISACCHARIDASE OF RABBIT SMALL INTESTINE: INTRACELLULAR DISTRIBUTION, SOLUBILIZATION, PURIFICATION AND SPECIFICITY. BIOCHIM. BIOPHYS. ACTA 85:69-81.

(2073) ------, TH. BAECHI, H. BINZ, AND OTHERS. 1970. LOCALIZATION OF RABBIT INTESTINAL SUCRASE WITH FERRITIN-ANTIBODY CONJUGATES. BIOCHIM. BIOPHYS. ACTA 196:20-28.

(2074) GRAY, G. M. 1967. MALABSORPTION OF CARBOHYDRATE. FED. PROC. 26(5):1415-1419.

(2075) ------. 1975. OLIGOSACCHARIDASES OF THE SMALL INTESTINAL BRUSH BORDER. ACS SYMP. SER. 15:181-190.

(2076) JEANES, A. 1975. DIGESTIBILITY OF FOOD POLYSACCHARIDES BY MAN: A REVIEW. ACS SYMP. SER. 15:336-347.

(2077) KIDDER, D. E., F. W. G. HILL, AND J. A. STEVENS. 1972. AUTOMATIC MEASUREMENT OF SOME MUCOSAL CARBOHYDRASES. CLIN. CHIM. ACTA 37:491-501.

(2078) KOLINSKA, J., AND G. SEMENZA. 1967. STUDIES ON INTESTINAL SUCRASE AND ON INTESTINAL SUGAR TRANSPORT. V. ISOLATION AND PROPERTIES OF SUCRASE-ISOMALTASE FROM RABBIT SMALL INTESTINE. BIOCHIM. BIOPHYS. 146:181-195.

(2079) LARNER, J., AND C. M. MCNICKLE. 1954. ACTION OF INTESTINAL EXTRACTS ON "BRANCHED" OLIGOSACCHARIDES. J. AM. CHM. SOC. 76:4747-4748.

(2080) ------. 1955. HYDROLYSIS OF ISOMALTOTRIOSE BY OLIGO-1,6-GLUCOSIDASE. J. AM. CHEM. SOC. 77:6385-6386.

(2081) ------ AND C. M. MCNICKLE. 1955. GASTROINTESTINAL DIGESTION OF STARCH. I. THE ACTION OF OLIGO-1,6-GLUCOSIDASE ON BRANCHED SACCHARIDES. J. BIOL. CHEM. 215:723-736.

(2082) ------ AND R. E. GILLESPIE. 1957. GASTROINTESTINAL DIGESTION OF STARCH. III. INTESTINAL CARBOHYDRASE ACTIVITIES IN GERM-FREE AND NON-GERM-FREE ANIMALS. J. BIOL. CHEM. 225:279-285.

(2083) MESSER, M., AND A. DAHLQVIST. 1966. A ONE-STEP ULTRAMICRO METHOD FOR THE ASSAY OF INTESTINAL DISACCHARIDASES. ANAL. BIOCHEM. 14:376-392.

(2084) ------ AND K. R. KERRY. 1967. INTESTINAL DIGESTION OF MALTOTRIOSE IN MAN. (ISOMALTOSE INCLUDED.) BIOCHIM. BIOPHYS. ACTA 132:432-443.

(2085) PRADER, A., S. AURICCHIO. 1965. DEFECTS OF INTESTINAL DISACCHARIDE ABSORPTION. ANN. REV. MED. 16:345-358.

(2086) RUBINO, A., F. ZIMBALATTI, AND S. AURICCHIO. 1964. INTESTINAL DISACCHARIDASE ACTIVITIES IN ADULT AND SUCKLING RATS. BIOCHIM. BIOPHYS. ACTA 92:305-311.

(2087) RUTTLOFF, R., R. NOACK, R. FRIESE, AND OTHERS. 1967. [POLYSACCHARIDE-SPLITTING ENZYMES IN THE BRUSH BORDER OF RAT MUCOSA, WITH PARTICULAR RESPECT TO GAMMA-AMYLASE] (IN GERMAN). ACTA BIOL. MED. GER. 19(6):831-839. ALSO IN CHEM. ABSTR. 1968. 68:111599A.

(2088) SEMENZA, G., AND S. AURICCHIO. 1962. CHROMATOGRAPHIC SEPARATION OF HUMAN INTESTINAL DISACCHARIDASES. BIOCHIM. BIOPHYS. ACTA 65:173-175.

(2089) ------, S. AURICCHIO, AND A. RUBINO. 1965. MULTIPLICITY OF HUMAN INTESTINAL DISACCHARIDASES. I. CHROMATOGRAPHIC SEPARATION OF MALTASES AND OF TWO LACTASES. BIOCHIM. BIOPHYS. ACTA 96:487-497.

(2090) ------, C. H. CURTIUS, J. KOLINSKA, AND M. MUELLER. 1967. STUDIES ON INTESTINAL SUCRASE AND INTESTINAL SUGAR TRANSPORT. VI. LIBERATION OF ALPHA-GLUCOSE BY SUCRASE AND ISOMALTASE FROM THE GLYCONE MOIETY OF THE SUBSTRATES. BIOCHIM. BIOPHYS. ACTA 146:196-204.

(2091) SIEBERT, G., U. GRUPP, AND K. HEINKEL. 1975. STUDIES ON ISOMALTITOL. NUTR. METAB. 18(1):191-196.

(2092) SONNTAG, W. M., M. L. BRILL, W. G. TOYER, JR., AND OTHERS. 1964. SUCROSE-ISOMALTOSE MALABSORPTION IN AN ADULT WOMAN. GASTROENTEROL. 47:18-25.

(2093) STEFANI, A., M. JANETT, AND G. SEMENZA. 1975. SMALL INTESTINAL SUCRASE AND ISOMALTASE SPLIT THE BOND BETWEEN GLUCOSYL-C1 AND THE GLYCOSYL OXYGEN. J. BIOL. CHEM. 250:7810-7813.

(2094) STEVENS, J. A., AND D. E. KIDDER. 1972. THE DISTRIBUTION OF TREHALASE, SUCRASE, ALPHA-AMYLASE, GLUCOAMYLASE AND LACTASE (BETA-GALACTOSIDASE) ALONG THE SMALL INTESTINE OF FIVE PIGS. BR. J. NUTR. 28:129-137.

(2095) STORELLI, C., H. VOEGELI, AND G. SEMENZA. 1972. RECONSTITUTION OF A SUCRASE-MEDIATED SUGAR TRANSPORT SYSTEM IN LIPID MEMBRANES. FEBS LETT. 24:287-292.

(2096) SWAMINATHAN, N., AND A. N. RADHAKRISHNAN. 1970. STUDIES ON INTESTINAL DISACCHARIDASES. IV. HETEROGENEITY OF MONKEY INTESTINAL MALTASES. INDIAN J. BIOCHEM. 7:19-23. ALSO IN CHEM. ABSTR. 1970. 73:31774S.

(2097) ------ AND A. N. RADHAKRISHNAN. 1970. INTESTINAL DISACCHARIDASES. V. CHARACTERIZATION AND PROPERTIES OF MALTASE FRACTIONS FROM MONKEY INTESTINE. INDIAN J. BIOCHEM. 7:24-28. ALSO IN CHEM. ABSTR. 1970. 73:405T.

(2098) TAEUFEL, K., W. KRAUSE, H. RUTTLOFF, AND R. MAUNE. 1967. [INTESTINAL SPLITTING OF OLIGOSACCHARIDES] (IN GERMAN). Z. GESAMTE EXP. MED. EXP. CHIR. 144(1):54-66. ALSO IN CHEM. ABSTR. 67:62227W.

SEE ALSO: 2022

XXI. Physiological properties

A. Physiological Effects of Blood-Volume Expanders

Expanders produced in various countries; general characteristics; general clinical evaluations and results of use; and miscellaneous effects.

(2099) BLOOM, W. L. 1951. PRESENT STATUS OF PLASMA VOLUME EXPANDERS IN THE TREATMENT OF SHOCK: CLINICAL LABORATORY STUDIES. ARCH. SURG. 63:739-741.

(2100) ------. 1961. THE COMPARISON OF THE APPARENT VOLUME OF DISTRIBUTION OF LARGE MOLECULAR WEIGHT DEXTRAN AND EVANS BLUE DYE. J. LAB. CLIN. MED. 58:605-612.

(2101) BOLLMAN, J. L., R. C. KNUTSON, AND J. S. LUNDY. 1951. VOLEMIC SUBSTANCES FOR REPLACEMENT OF BLOOD. ARCH. SURG. 63:718-727.

(2102) BOWMAN, H. W. 1953. CLINICAL EVALUATION OF DEXTRAN AS A PLASMA VOLUME EXPANDER. J. AM. MED. ASSOC. 153:24-26.

(2103) BULL, J. P., C. R. RICKETTS, J. R. SQUIRE, AND OTHERS. 1949. DEXTRAN AS A PLASMA SUBSTITUTE. LANCET 256:134-143.

(2104) CARBONE, J. V., L. L. UZMAN, AND I. C. PLOUGH. 1955. CHANGES IN SERUM PROTEINS PRODUCED BY INFUSIONS OF DEXTRAN. PROC. SOC. EXP. BIOL. MED. 90:68-70.

(2105) DARGAN, E. L., A. OHIN, E. J. HEHRE, AND W. METCALF. 1962. CLINICAL EVALUATION OF A NEW DEXTRAN PLASMA EXPANDER. J. AM. MED. ASSOC. 179:203-206.

(2106) DERRICK, J. R., AND M. M. GUEST. 1976. DEXTRANS. CURRENT CONCEPTS OF BASIC ACTIONS AND CLINICAL APPLICATIONS. CHARLES C. THOMAS PUBLISHER, SPRINGFIELD, ILL. 222 PP.

(2107) EWALD, R. A., W. H. CROSBY. 1963. REPORTED EXPERIENCES WITH DEXTRAN IN COMMUNIST COUNTRIES. TRANSFUSION 3:376-386.

(2108) GROENWALL, A., AND B. INGELMAN. 1944. DEXTRAN AND ITS BEHAVIOR IN PARENTERAL ADMINISTRATION. I. ACTA PHYSIOL. SCAND. 7:97-107. ALSO IN CHEM. ABSTR. 39:4637.

(2109) ------ AND B. INGELMAN. 1945. [INVESTIGATIONS ON DEXTRAN AND ITS USE IN PARENTERAL ADMINISTRATION. II. PHYSIOLOGICAL INVESTIGATIONS] (IN GERMAN). ACTA PHYSIOLOG. SCAND. 9(1):1-27.

(2110) ------ AND B. INGELMAN. 1945. DEXTRAN AS A SUBSTITUTE FOR PLASMA. NATURE (LONDON) 155:45.

(2111) ------. 1951. [DEXTRAN--A NEW SWEDISH DRUG. II. SHOCK THERAPY WITH MACRODEX--SOME GENERAL OBSERVATIONS] (IN SWEDISH). SVENSK KEM. TIDSKR. 63(10):222-230.

(2112) ------. 1951. [EXPERIENCE WITH A COLLOIDAL INFUSION SOLUTION OF DEXTRAN (MACRODEX)] (IN GERMAN). DEUT. MED. WOCHSCHR. 76:1023-1027.

(2113) ------. 1957. DEXTRAN AND ITS USE IN COLLOIDAL INFUSION SOLUTIONS. ACADEMIC PRESS, INC., NEW YORK. 156 PP.

(2114) ------. 1969. BIOLOGICAL EFFECTS OF DEXTRANS. ACTA ACAD. REGIAE SCI. UPSAL. 12:24-42.

(2115) GROPPER, A. L., L. G. RAISZ, AND W. H. AMSPACHER. 1952. PLASMA EXPANDERS. SURG. GYNECOL. OBSTET. 95:521-542.

(2116) ------, E. W. COCKRELL, L. G. RAISZ, AND E. J. PULASKI. 1952. A COMPARISON OF DEXTRAN AND OXYPOLYGELATIN IN THE TREATMENT OF HEMORRHAGIC HYPOTENSION. AM. J. PHYSIOL. 169:749-756.

(2117) GRUBER, U. F. 1968. [THE NEW BRITISH DEXTRAN (DEXTRAN BP 110)] (IN GERMAN). SCHWEIZ. MED. WOCHSCHR. 98:1057.

(2118) HARRISON, J. H., W. F. DURDEN, AND A. S. KELLUM. 1955. HYDRODEXTRAN IN THE TREATMENT OF HEMORRHAGIC SHOCK: WITH PLASMA VOLUME, BLOOD VOLUME, PROTEIN AND EXCRETION STUDIES. ANN. SURG. 142:824-830.

(2119) INGELMAN, B. 1945. [DEXTRAN AS A SUBSTITUTE FOR PLASMA] (IN SWEDISH, ENGLISH SUMMARY). IN RESULTS OF SUGAR RESEARCH IN UPPSALA, VOL. 7, PP. 188-190. COMMUNICATIONS FROM THE SWEDISH SUGAR CORPORATION, MALMOE, SWEDEN.

(2120) ------. 1947. DEXTRAN AND ITS USE AS A PLASMA SUBSTITUTE. ACTA CHEM. SCAND. 1:731-738.

(2121) ------. 1949. INVESTIGATION ON DEXTRAN AND ITS APPLICATION AS A PLASMA SUBSTITUTE. (CHEMICAL, PHYSIOLOGICAL, AND CLINICAL.) UPSALA LAEKAREFOEREN. FOERH. 54:107-122. ALSO IN BIOL. ABSTR. 1949. 23:23158.

(2122) ------. 1951. [DEXTRAN--A NEW SWEDISH DRUG. I.] (IN SWEDISH). SVENSK KEM. TIDSKR. 63:213-222.

(2123) JOHNSTON, E. V., AND J. S. LUNDY. 1953. USE OF DEXTRAN (MACRODEX) IN BURNS. I. REVIEW OF THE PHYSIOLOGY OF DEXTRAN. AM. J. SURG. 85:713-719.

(2124) KOSTRZEWSKA, E., L. KONOPKA, R. SCHARF, AND OTHERS. 1969. STUDIES ON PLASMA VOLUME AFTER INFUSION OF DEXTRAN-70 POLFA. POL. MED. SCI. HIST. BULL. 12:128-131. ALSO IN CHEM. ABSTR. 1969. 71:121229D.

(2125) ------ AND A. GREGOR. 1969. EVALUATION OF RHEOLOGICAL PROPERTIES OF DEXTRAN-40 POLFA. POL. MED. SCI. HIST. BULL. 12:180-184. ALSO IN CHEM. ABSTR. 1970. 72:29508U.

(2126) MANSKI, W., AND H. KOZDROJ. 1954. [DEXTRAN. III. POLYDISPERSION OF MOLECULAR WEIGHTS AND SOME PHYSIOLOGICAL AND SEROLOGICAL PROPERTIES OF DEXTRAN] (IN POLISH, ENGLISH SUMMARY). ARCH. IMMUNOL. TER. DOSW. 2:111-126. ALSO IN CHEM. ABSTR. 52:2986D.

(2127) MAYCOCK, W. D'A. 1952. ANALYSIS OF REPORTS ON THE INFUSION OF DEXTRAN SOLUTION. LANCET 262:1081-1083.

(2128) ------. 1954. PLASMA SUBSTITUTES. (INCLUDES AN HISTORICAL REVIEW.) BR. MED. BULL. 10:29-31.

(2129) METCALF, W., L. M. ROUSSELOT. 1956. THE KINETICS OF EXPANDER TRANSFER AND DISTRIBUTION FROM PLASMA DISAPPEARANCE CURVES. SURG. FORUM 6:33-37.

(2130) ------, E. L. DARGAN, E. J. HEHRE, AND OTHERS. 1962. CLINICAL PHYSIOLOGICAL CHARACTERIZATION OF A NEW DEXTRAN. SURG. GYNECOL. OBSTET. 115:199-206.

(2131) MUKHERJEE, K. L., AND G. WERNER. 1955. PHARMACOLOGICAL ACTIONS OF MACROMOLECULAR SUBSTANCES. J. SCI. IND. RES. 14C:70-75.

(2132) PHARMACIA. 1967. DEXTRAN ABSTRACT JOURNAL. (15-20 ISSUES PUBLISHED YEARLY, BEGINNING IN 1967.) SCIENTIFIC INFORMATION DEPARTMENT, PHARMACIA, UPPSALA, SWEDEN.

(2133) ROZENBERG, G. Y., T. V. POLUSHINA. 1959. PROPERTIES OF A SOVIET PREPARATION OF DEXTRAN, POLYGLUKIN. UGLEVODY UGLEVODNYI. OBMEN ZHIVOTN. RASTIT. ORG. MATER. KONF. 160-165. ALSO IN CHEM. ABSTR. 1961. 55:25043E.

(2134) ------, A. A. FROMM, T. V. POLUSHINA, AND OTHERS. 1965. [OPTIMAL MOLECULAR WEIGHT OF THE BLOOD SUBSTITUTE POLYGLUCIN] (IN RUSSIAN). PROBL. GEMATOL. PERELIV. KROVI. 9(11):26- . ALSO IN FED. PROC. TRANSL. SUPPL. 1966. 25(5): PART II:T805-T808.

(2135) SANDOR, S. 1967. [THE EXCRETION OF DEXTRAN PREPARATES OF DIFFERENT MOLECULAR WEIGHTS WITH THE URINE; THE MOLECULAR WEIGHT DISTRIBUTION AND EXCRETION OF PLASMODEX] (IN HUGARIAN, ENGLISH ABSTRACT). ACTA PHARM. HUNG. 37:178-185.

(2136) SEGAL, A. 1964. THE CLINICAL USE OF DEXTRAN SOLUTIONS. GRUNE AND STRATTON, NEW YORK AND LONDON. 74 PP.

(2137) SEMPLE, R. E., AND A. E. T. THOMSEN. 1957. A METHOD FOR THE DETERMINATION OF THE CIRCULATING PLASMA VOLUME WITH DEXTRAN. ONT. MED. REV. 24:191-192.

(2138) SPENCER, J. N., AND H. G. PAYNE. 1952. DEXTRAN TOLERANCE STUDIES [AN ABSTRACT]. FED. PROC. 11:392.

(2139) THORSEN, H. G. R. 1949. DEXTRAN AS A PLASMA SUBSTITUTE. LANCET 256:132.

(2140) ------. 1950. INFLUENCE OF DEXTRAN PH ON TENSILE STRENGTH OF HEALING WOUNDS. AN EXPERIMENTAL STUDY. ACTA CHIR. SCAND. 100:422-433.

(2141) VAN DEN HEUVEL-HEYMANS, G. 1950. [DEXTRAN, SUBSTITUTE FOR BLOOD PLASMA AND HOMEOSTASIS OF ARTERIAL PRESSURE] (IN FRENCH, ENGLISH SUMMARY). ARCH. INT. PHARMACODYN. THER. 83(2):308-318.

(2142) VOROBEI, A. I. 1966. [CHANGES IN INTESTINAL MOTILITY UNDER THE EFFECT OF POLYGLYUKIN] (IN UKRANIAN). FIZIOL. ZH. AKAD. NAUK. UKR. RSR 12:216-264. ALSO IN CHEM. ABSTR. 1966. 65:4482C.

(2143) WOLMAN, M., B. WOLMAN. 1956. EFFECT OF POLYSACCHARIDES ON THE FORMATION OF GRANULATION TISSUE. AM. MED. ASSOC. ARCH. PATHOL. 62:74-84.

(2144) ------. 1956. HISTOLOGICAL CHANGES PRODUCED BY INJECTIONS OF POLYSACCHARIDES. ARCH. PATHOL. 62:149-154.

SEE ALSO: 922 1172 1217 1218 1583 2132

B. Permeability of Capillaries and Renal Glomeruli and Factors That Exert Influence

Mechanism, role in osmotic effect, effect of molecular weight, measurement of pore sizes, theoretical considerations, and some related renal functions.

(2145) ARTURSON, G., T. GROTH, AND G. GROTTE. 1971. HUMAN GLOMERULAR MEMBRANE POROSITY AND FILTRATION PRESSURE: DEXTRAN CLEARANCE DATA ANALYSED BY THEORETICAL MODELS. CLIN. SCI. 40:137-158.

(2146) BREWER, D. B. 1951. RENAL CLEARANCE OF DEXTRANS OF VARYING MOLECULAR WEIGHTS. PROC. ROY. SOC. MED. 44:561-563.

(2147) DAVIS, J. H., J. W. BENSON, M. WOLFE, AND OTHERS. 1955. THE EFFECT OF CAPILLARY PERMEABILITY ON THE MAINTENANCE OF PLASMA VOLUME FOLLOWING THE ADMINISTRATION OF DEXTRAN AND ALBUMIN. SURG. FORUM 5:455-461.

(2148) ESPOSITO, S. 1958. URINARY EXCRETION OF DEXTRAN MOLECULES AS AN INDEX OF GLOMERULAR PERMEABILITY. 1. THEORY AND EVALUATION OF THE METHOD. ARCH. SCI. MED. 106:564-568. ALSO IN CHEM. ABSTR. 1959. 53:2438.

(2149) ------. 1959. EXCRETION OF DEXTRAN MOLECULES IN THE URINE AS AN INDEX OF GLOMERULAR PERMEABILITY. RELATION BETWEEN DEXTRAN CLEARANCE AND CLEARANCE OF SODUM THIOSULFATE. ARCH. SCI. MED. 108:871-875. ALSO IN CHEM. ABSTR. 1960. 54:17524G.

(2150) ------. 1959. URINARY EXCRETION OF THE DEXTRAN MOLECULE AS AN INDEX FOR GLOMERULAR PERMEABILITY. ARCH. SCI. MED. 108:876-886. ALSO IN CHEM. ABSTR. 1960. 54:17524H.

(2151) FLEMING, J. W., W. H. CARGILL, AND W. L. BLOOM. 1952. EFFECTS OF INTRAVENOUS ADMINISTRATION OF DEXTRAN ON RENAL FUNCTION. PROC. SOC. EXP. BIOL. MED. 79:604-606.

(2152) GARBY, L., AND G. GROTTE. 1956. THEORETICAL CONSIDERATIONS ON THE COLLOID OSMOTIC EFFECT OF PLASMA EXPANDERS. ACTA SOC. MED. UPS. 61:103-106. ALSO IN CHEM. ABSTR. 1958. 52:7511G.

(2153) GARLICK, D. G., AND E. M. RENKIN. 1970. TRANSPORT OF LARGE MOLECULES FROM PLASMA TO INTERSTITIAL FLUID AND LYMPH IN DOGS. AM. J. PHYSIOL. 219:1595-1605.

(2154) GIEBISCH, G., H. D. LAUSON, R. F. PITTS, AND E. ZABLOW. 1954. RENAL EXCRETION AND VOLUME DISTRIBUTION OF VARIOUS DEXTRANS. AM. J. PHYSIOL. 178:168-176. ALSO IN CHEM. ABSTR. 1954. 11658H.

(2155) GROTTE, G., R. C. KNUTSON, AND J. L. BOLLMAN. 1951. THE DIFFUSION OF DEXTRAN OF DIFFERENT MOLECULAR SIZES TO LYMPH AND URINE. J. LAB. CLIN. MED. 38:577-582.

(2156) ------. 1956. PASSAGE OF DEXTRAN MOLECULES ACROSS THE BLOOD-LYMPH BARRIER. ACTA CHIR. SCAND. SUPPL. 211, 84 PP. ALSO IN CHEM. ABSTR. 1956. 50:14077E.

(2157) HARRIS, J. M., D. K. LUSCOMBE, AND R. H. POYSER. 1967. THE INFLUENCE OF MOLECULAR WEIGHT AND STRUCTURE ON THE VASCULAR PERMEABILITY RESPONSES INDUCED BY GLUCOSE POLYMERS IN RAT SKIN. BR. J. PHARMACOL. CHEMOTHER. 29:16-24.

(2158) HINSHAW, L. B., AND T. K. SHIRES. 1971. EFFECT DEXTRAN ON RENAL HEMODYNAMICS. IN J. R. DERRICK AND M. M. GUEST, EDS. DEXTRANS. CURRENT CONCEPTS OF BASIC ACTIONS AND CLINICAL APPLICATIONS, PP. 62-72. CHARLES C. THOMAS PUBLISHER, SPRINGFIELD, ILL.

(2159) HOWARD, J. M., J. P. FRAWLEY, C. P. ARTZ, AND Y. SAKO. 1955. THE FATE OF DEXTRAN AND MODIFIED GELATINE IN CASUALTIES WITH RENAL INSUFFICIENCY. SURG. GYNECOL. OBSTET. 100:207-210.

(2160) JAMES, J. A., AND C. T. ASHWORTH. 1961. SOME FEATURES OF GLOMERULAR FILTRATION AND PERMEABILITY REVEALED BY ELECTRON MICROSCOPY AFTER INTRAPERITONEAL INJECTION OF DEXTRAN IN RATS. AM. J. PATHOL. 38:515-525.

(2161) KUEHN, U. 1962. [FACTORS INFLUENCING THE RENAL EXCRETION OF DEXTRAN] (IN GERMAN). ACTA BIOL. MED. GER. 9:467-478. ALSO IN CHEM. ABSTR. 1963. 59:3220D.

(2162) MOGENSEN, C. E. 1970. THE PERMEABILITY OF THE GLOMERULAR CAPILLARIES AS STUDIED BY RENAL DEXTRAN CLEARANCE IN NORMAL AND DIABETIC SUBJECTS. IN C. CRONE, ED. CAPILLARY PERMEABILITY, PROC. ALFRED BENZON SYMP. 2ND, PP. 531-543. MUNKSGAARD, COPENHAGEN. ALSO IN CHEM. ABSTR. 1971. 74:96824Y.

(2163) MOLLISON, A. W., AND J. B. RENNIE. 1954. TREATMENT OF RENAL OEDEMA WITH DEXTRAN. BR. MED. J. (4867):893-899.

(2164) PICKERT, H. 1959. [EXCHANGES BETWEEN INTRA- AND EXTRAVASCULAR COMPARTMENTS WITH REFERENCE TO DEXTRAN AS AN EXAMPLE FOR DYNAMICS OF MAKROMOLECULAR SUBSTANCES] (IN GERMAN). ANAESTHESIST 8:42-45. ALSO IN CHEM. ABSTR. 1959. 53:11629B.

(2165) RICKETTS, C. R. 1966. MOLECULAR PERMEABILITY OF THE BURNED AREA. PROC. SOC. EXP. BIOL. MED. 121:770-777.

(2166) ROTHMAN, A. R., E. J. FREIREICH, J. R. GASKINS, AND OTHERS. 1961. EXCHANGE OF INULIN AND DEXTRAN BETWEEN BLOOD AND CEREBROSPINAL FLUID. AM. J. PHYSIOL. 201:1145-1148.

(2167) ------, J. R. GASKINS, E. J. FREIREICH, AND D. P. RALL. 1962. IMPORTANCE OF BULK FLOW IN THE EXCHANGE OF COMPOUNDS ACROSS THE BLOOD CEREBROSPINAL FLUID BARRIER. NATURE (LONDON) 193:383-385.

(2168) SHIRLEY, H. H., JR., C. G. WOLDRAM, K. WASSERMAN, AND H. S. MAYERSON. 1957. CAPILLARY PERMEABILITY TOWARDS MACROMOLECULES: STRETCHED PORE PHENOMENON. AM. J. PHYSIOL. 190:189-193.

(2169) SIMIONESCU, N., AND G. E. PALADE. 1971. DEXTRANS AND GLYCOGENS AS PARTICULATE TRACERS FOR STUDYING CAPILLARY PERMEABILITY. J. CELL. BIOL. 50:616-624.

(2170) WALLENIUS, G. 1950. THE RELIEF OF NEPHROTIC EDEMA BY DEXTRAN INFUSIONS. SCAND. J. CLIN. LAB. INVEST. 2:228-238.

(2171) ------. 1952. DEXTRAN CLEARANCE AS A MEASURE OF GLOMERULAR PERMEABILITY. SCAND. J. CLIN. LAB. INVEST. 4:78.

(2172) ------. 1954. RENAL CLEARANCE OF DEXTRAN AS A MEASURE OF GLOMERULAR PERMEABILITY. ACTA SOC. MED. UPS. SUPPL. 4, 59:1-91.

(2173) WASSERMAN, K., H. S. MAYERSON. 1952. PLASMA, LYMPH AND URINE STUDIES AFTER DEXTRAN INFUSIONS. AM. J. PHYSIOL. 171:218-232.

(2174) ------ AND H. S. MAYERSON. 1954. RELATIVE IMPORTANCE OF DEXTRAN MOLECULAR SIZE IN PLASMA VOLUME EXPANSION. AM. J. PHYSIOL. 176:104-112.

(2175) ------, L. LOEB, AND H. S. MAYERSON. 1955. CAPILLARY PERMEABILITY TO MACROMOLECULES. CIRC. RES. 3:594-603.

SEE ALSO: 940 945 2132

C. Antiatherogenic Action of Dextran Administered Parenterally and Orally

(2176) BRAHMANKAR, D. M., AND W. E. CONNOR. 1967. EFFECT OF HIGH MOLECULAR WEIGHT DEXTRAN ON EXPERIMENTAL HYPERCHOLESTEROLEMIA. CIRC. RES. 21:817-821. ALSO IN CHEM. ABSTR. 1968. 68:28319P.

(2177) DITZEL, J., AND J. DYERBERG. 1969. THE CHOLESTEROL-LOWERING EFFECT OF DEXTRAN-40. J. ATHEROSCLER. RES. 10:5-10.

(2178) FAHRENBACH, M. J., B. A. RICCARD, AND W. C. GRANT. 1966. HYPOCHOLESTEROLEMIC ACTIVITY OF MUCILAGINOUS POLYSACCHARIDES IN WHITE LEGHORN COCKERELS. PROC. SOC. EXP. BIOL. MED. 123:321-326.

(2179) FLOTTE, C. T., AND R. W. BUXTON. 1963. REDUCTION OF SERUM CHOLESTEROL BY DEXTRAN. IN 36TH SCIENTIFIC SESSIONS OF THE AMERICAN HEART ASSOCIATION.

(2180) HOUSSET, E., J. ETIENNE, J. LOEPER, AND J. COTTET. 1968. [EFFECT OF DEXTRAN ON HUMAN PLASMA LIPOPROTEIN LIPASE ACTIVITY] (IN FRENCH). PATHOL. BIOL. 16:653-656. ALSO IN CHEM. ABSTR. 1968. 69:85368Y.

(2181) JOZSA, L., L. PERNECZKY, AND G. LUSZTIG. 1961. [CHEMICAL STUDIES OF THE AORTIC WALL IN EXPERIMENTAL, DEXTRAN-INHIBITED CHOLESTEROL ATHEROSCLEROSIS] (IN GERMAN). Z. GESAMTE INN. MED. IHRE GRENZGEB. 16:935-938. ALSO IN CHEM. ABSTR. 1962. 56:9321C.

(2182) LEE, Y-C., AND E. C. LAYNE. 1968. EFFECT OF DEXTRAN ON FECAL EXCRETION OF BILE ACIDS AND NEUTRAL STEROIDS. BIOCHEM. MED. 2:102-109.

(2183) ------. 1970. EFFECT OF DEXTRAN ON EXPERIMENTAL HYPERLIPEMIA IN RABBITS. CURR. THER. RES. CLIN. EXP. 12(4):242-246. ALSO IN CHEM. ABSTR. 1970. 73:12918A.

(2184) LOESEL, H., AND W. APPEL. 1967. [EFFECT OF LOW-MOLECULAR-WEIGHT DEXTRAN (RHEOMACRODEX) ON SERUM CHOLESTEROL LEVEL] (IN GERMAN). FORTSCHR. MED. 85(12):517-520, 522. ALSO IN CHEM. ABSTR. 1968. 68:1871A.

(2185) MADAN, D. K., AND D. E. CADWALLADER. 1970. EFFECT OF MACROMOLECULES ON AQUEOUS SOLUBILITY OF CHOLESTEROL. J. PHARM. SCI. 59:1362-1363.

(2186) MCCURDY, R. W., H. V. BELCHER, C. T. FLOTTE, AND O. R. BOONE. 1969. EFFECT OF POWDERED DEXTRAN ON EXPERIMENTAL HYPERCHOLESTEROLEMIA. AM. SURG. 35(6):431-432. ALSO IN CHEM. ABSTR. 1969. 71:59312X.

(2187) MORRISON, A. B. 1958. THE EFFECT OF DEXTRAN ON SERUM PROTEINS AND SERUM CHOLESTEROL. Q. J. EXP. PHYSIOL. COGN. MED. SCI. 41:51-57.

(2188) ROTHSCHILD, M. A., M. ORATZ, E. WIMER, AND S. S. SCHREIBER. 1960. EFFECTS OF DEXTRAN ON CORTISONE-INDUCED HYPERLIPEMIA IN RABBITS. PROC. SOC. EXP. BIOL. MED. 104:478-480.

(2189) STROER, W. F. H. 1967. ON THE INTERACTION OF DEXTRANMOLECULES WITH PLASMA PROTEINS AND CHOLESTEROL. ACTA PHYSIOL. PHARMACOL. NEERL. 14:363-364.

XXII. Representative clinical uses

Limited coverage, nontechnical, from layman's viewpoint; emphasis on historical and role in mass casualties.

(2190) ABERG, B. 1960. [ROLE OF DEXTRAN IN ATOMIC MEDICINE - SOME OBSERVATIONS AFTER A STUDY TRIP IN THE USA] (IN SWEDISH, ENGLISH SUMMARY). TIDSKR. MILITAR HALSOVARD (STOCKHOLM) 85:65-69.

(2191) AMSPACHER, W. H., AND A. R. CURRERI. 1953. USE OF DEXTRAN IN CONTROL OF SHOCK RESULTING FROM WAR WOUNDS. ARCH. SURG. 66:730-740.

(2192) ANONYMOUS. 1968. WORLD WAR II: DEXTRAN'S ORIGIN. J. AM. MED. ASSOC. 204(11):45.

(2193) ------. 1968. DEXTRAN PROTECTS ORTHOPEDIC PATIENTS AGAINST EMBOLISM. J. AM. MED. ASSOC. 206:1438.

(2194) ARTZ, C. P., AND J. M. HOWARD. 1954. INITIAL CARE OF THE SEVERELY WOUNDED. J. AM. MED. ASSOC. 156:488-491.

(2195) ------, J. M. HOWARD, AND J. P. FRAWLEY. 1955. CLINICAL OBSERVATIONS ON THE USE OF DEXTRAN AND MODIFIED FLUID GELATIN IN COMBAT CASUALTIES. SURGERY 37:612-621.

(2196) ASTON, P. 1969. ROAD ACCIDENTS AND THE FAMILY DOCTOR. EQUIPMENT FOR USE AT ROADSIDE ACCIDENTS. BR. MED. J. 4:214-217.

(2197) ATIK, M. 1967. DEXTRAN 40 AND DEXTRAN 70. ARCH. SURG. 94:664-671. ALSO IN CHEM. ABSTR. 1967. 67:31427G.

(2198) BLOOM, W. L. 1959. TREATMENT OF SHOCK IN DIABETIC ACIDOSIS: DEXTRAN SERVES AS AN IMPORTANT ADDITION TO THERAPY IN THE DIABETIC IN ACIDOSIS. J. MED. ASSOC. GA. 48:213-215.

(2199) ------, D. S. HARMER, M. F. BRYANT, AND S. S. BREWER. 1964. COATING OF VASCULAR SURFACES AND CELLS: A NEW CONCEPT IN PREVENTION OF INTRAVASCULAR THROMBOSIS. PROC. SOC. EXP. BIOL. MED. 11:384-386.

(2200) BOHMANSSON, G., H. ROSENQVIST, H. G. R. THORSEN, AND O. WILANDER. 1946. CLINICAL EXPERIENCES WITH DEXTRAN AS A PLASMA SUBSTITUTE. (SUMMARY IN ENGLISH, FRENCH, AND GERMAN.) ACTA CHIR. SCAND. 94:149-167.

(2201) BOYD, A. M., F. FLETCHER, AND A. H. RATCLIFFE. 1953. SUPPORTIVE THERAPY: AN IMPROVED TYPE OF DEXTRAN. LANCET 264:59-63.

(2202) BURKE, W. E. 1953. DEXTRAN FOR NATIONAL DEFENSE. SUGAR 48(11):50-51.

(2203) CHANG, H. L., J. S. CHEN, C. H. CHIANG, AND OTHERS. 1952. DEXTRAN INFUSION IN NORMAL CHINESE MAN. U.S. ARMED FORCES MED. J. 3(3):341-352.

(2204) CHOATE, W. H., J. O. JUST-VIERA, AND G. H. YEAGER. 1964. PREVENTION OF EXPERIMENTAL PERITONEAL ADHESIONS BY DEXTRAN. ARCH. SURG. 88:249-254.

(2205) CROCKER, M. C. 1968. FLUIDS FOR EMERGENCY CONDITIONS. A REVIEW WITH SPECIAL REFERENCE TO DISASTER SITUATIONS. ANAESTHESIA 23:413-424.

(2206) CRONK, J. N. 1953. DEXTRAN. CHEMURGIC DIGEST 12:6-8.

(2207) ------. 1954. DEXTRAN - A LIFE SAVER. SUGAR J. 17(2):27-28.

(2208) CURRY, G. J. 1954. THE FLINT TORNADO. AM. J. SURG. 87:489-491.

(2209) DE MORAIS, O. J., W. JASBIK, H. COUTINHO, AND OTHERS. 1963. HEMODILUTION IN EXTRACORPOREAL CIRCULATION USING PLASMA AND DEXTRAN (MACRODEX) AS DILUENTS. J. CARDIOV. SURG. 4:36-44.

(2210) DIECKHOFF, J. 1951. [DEXTRAN IN INTESTINAL TOXICOSIS OF INFANTS: ITS EFFECT AND MEASUREMENT] (IN GERMAN). ARCH. KINDERHEILKD. 142(3):1-12.

(2211) DUNLOP, G. R. 1954. THE WORCESTER TORNADO. AM. J. SURG. 87:487-488.

(2212) ELKES, J. 1949. FATS IN HUMAN NUTRITION. (EMULSIFIED IN CLINICAL DEXTRAN FOR INFUSION.) NATURE (LONDON) 164:1036-1037.

(2213) ENYART, J. L., AND D. W. MILLER. 1955. TREATMENT OF BURNS RESULTING FROM DISASTER. J. AM. MED. ASSOC. 158:95-100.

(2214) EVANS, E. I. 1951. ATOMIC BURN INJURY. J. AM. MED. ASSOC. 145:1342-1345.

(2215) ------ AND M. M. MARTIN. 1952-1954. THE SUCCESSFUL USE OF DEXTRAN IN THE TREATMENT AND PREVENTION OF SHOCK IN THE BURNED PATIENT. SURG. FORUM. 5:743-744.

(2216) GARDNER, F. H., AND M. T. LAFORET. 1960. THE USE OF CLINICAL DEXTRAN IN PATIENTS WITH PAROXYSMAL NOCTURNAL HEMOGLOBINURIA. J. LAB. CLIN. MED. 55:946-958.

(2217) GELIN, L. E. 1952. MACRODEX AND OXYGEN IN THE PRIMARY TREATMENT OF EXTENSIVE BURNS. ACTA CHIR. SCAND. 103:351-362.

(2218) ------ AND B. ZEDERFELDT. 1960. LOW MOLECULAR WEIGHT DEXTRAN--A RHEOLOGIC AGENT COUNTERACTING CAPILLARY STAGNATION. ACTA CHIR. SCAND. 119:168-169.

(2219) ------ AND B. INGELMAN. 1961. RHEOMACRODEX (TRADEMARK) - A NEW DEXTRAN SOLUTION FOR RHEOLOGICAL TREATMENT OF IMPAIRED CAPILLARY FLOW. ACTA CHIR. SCAND. 122:294-302.

(2220) GILROY, J., M. I. BARNHART, AND J. S. MEYER. 1969. TREATMENT OF ACUTE SHOCK WITH DEXTRAN 40. J. AM. MED. ASSOC. 210:293-298.

(2221) HOWARD, J. M., R. V. EBERT, W. L. BLOOM, AND M. H. SLOAN. 1959. THE PRESENT STATUS OF DEXTRAN AS A PLASMA EXPANDER. AM. J. SURG. 97:593-602.

(2222) JAWORSKI, H. L. 1954. THE WACO TORNADO DISASTER. AM. J. SURG. 87:484-486.

(2223) JOHNSTON, E. V., W. A. BENNETT, J. S. LUNDY, AND J. M. JANES. 1953. USE OF DEXTRAN (MACRODEX) IN BURNS. II. CLINICAL EVALUATION OF EIGHT CASES. AM. J. SURG. 35:720-728.

(2224) JOSSA, P. 1951. [SUBSTITUTION OF DEXTRAN FOR PLASMA OF THE DANGEROUS UNIVERSAL DONOR] (IN FRENCH). C.R. SOC. BIOL. 145:1252-1254.

(2225) KOBLER, J. 1956. WHY MAC ISN'T DEAD. SAT. EVENING POST, AUG. 18.

(2226) LONG, D. M., JR., L. SANCHEZ, R. L. VARCO, AND C-W. LILLEHEI. 1961. THE USE OF LOW MOLECULAR EIGHT DEXTRAN AND SERUM ALBUMIN AS PLASMA EXPANDERS IN EXTRACORPOREAL CIRCULATION. SURGERY 50:12-28.

(2227) LUNDY, J. S. 1951. BALANCED SUPPORTIVE THERAPY DURING ANESTHESIA. NORTHWEST MED. 50(5):341-343.

(2228) MANAX, W. G. 1971. DEXTRANS IN ORGAN TRANSPLANTATION. IN J. R. DERRICK AND M. M. GUEST, EDS. DEXTRANS. CURRENT CONCEPTS OF BASIC ACTIONS AND CLINICAL APPLICATIONS, PP. 73-76. CHARLES C. THOMAS PUBLISHER, SPRINGFIELD, ILL.

(2229) PHARMACIA. 1967. DEXTRAN ABSTRACT JOURNAL. (15-20 ISSUES PUBLISHED YEARLY, BEGINNING IN 1967.) SCIENTIFIC INFORMATION DEPARTMENT, PHARMACIA, UPPSALA, SWEDEN.

(2230) POPPER, H. L., AND H. NECHELES. 1957. PREVENTION OF EXPERIMENTAL PANCREATIC FAT NECROSIS. VI. DEXTRAN. SURG. GYNECOL. OBSTET. 105:103-104.

(2231) PULASKI, E. J. 1952. CLINICAL STATUS OF PLASMA SUBSTITUTES. CHEM. ENG. NEWS 30(21):2187-2189.

(2232) ROSENQVIST, H. 1947. THE PRIMARY TREATMENT OF EXTENSIVE BURNS: A CLINICAL STUDY. ACTA CHIR. SCAND. SUPPL. 124, 95:1-128.

(2233) ------ AND H. G. R. THORSEN. 1951. MACRODEX IN THE TREATMENT OF EXTENSIVE BURNS. ARCH. SURG. 62:524-531.

(2234) SAWYER, R. B., AND J. A. MONCRIEF. 1965. DEXTRAN SPECIFICITY IN THROMBUS INHIBITION. ARCH. SURG. 90:562-566.

(2235) ------, J. A. MONCRIEF, AND P. C. CANIZARO. 1965. DEXTRAN THERAPY IN THROMBOPHLEBITIS. J. AM. MED. ASSOC. 191:740-742.

(2236) SIEGAL, D. L., A. BILGUTAY, L. SANCHEZ, AND C-W. LILLEHEI. 1962. EXPERIENCE WITH AN ARTIFICIAL PLASMA FOR USE WITH EXTRACORPOREAL CIRCULATION. J. AM. MED. ASSOC. 179:206-209.

(2237) SNOOK, R. 1969. ROAD ACCIDENTS AND THE FAMILY DOCTOR: RESUSCIATION AT ROAD ACCIDENTS. BR. MED. J. 4:348-350.

(2238) STRATTON, F., J. F. WILKINSON, AND M. C. G. ISRAELS. 1958. CLINICAL DEXTRAN FOR ACUTE EPISODES IN PAROXYSMAL NOCTURNAL HAEMOGLOBINURIA. LANCET --:831.

(2239) VARA, P. 1950. OBSERVATIONS ON THE USE OF 10 PERCENT SALT-FREE MACRODEX (DEXTRAN) IN TOXAEMIA OF LATE PREGNANCY. ACTA OBSTET. GYNECOL. SCAND. SUPPL. 6, 30:1-31.

(2240) WARD, R. J., AND J. E. MATHWIG. 1956. DEXTRAN: CLINICAL USE IN A COUNTY HOSPITAL. NORTHWEST MED. 55:186-187.

(2241) WHITE, W. H. 1953. NEW BLOOD "SUBSTITUTES" END RISKS OF PLASMA. LOOK MAGAZINE, APRIL, 105-109.

(2242) WILSON, J. S., E. H. ESTES, JR., J. T. DOYLE, AND OTHERS. 1952. THE USE OF DEXTRAN IN THE TREATMENT OF BLOOD LOSS AND SHOCK. AM. J. MED. SCI. 223:364-369.

(2243) ZOLOTOKRYLINA, E. S., AND S. S. CHISTYAKOV. 1965. [THE FEASIBILITY OF THE THERAPEUTIC USE OF DEXTRAN IN CASES OF CLINICAL DEATH CAUSED BY RAPID EXSANGUINATION] (IN RUSSIAN). PROB. GEMATOL. PEREL. KROVI 10(8):32- . ALSO IN FED. PROC. TRANS. SUPPL. 1966. 25(4): PART II, T645-T647.

SEE ALSO: 918 1574 1850 2024 2106 2113 2121 THROUGH 2123 2132 2472

XXIII. Dextrans and associated aspects in dental caries

A. Cariogenic Bacteria

Origin of strains, metabolism and factors that influence it, and growth kinetics.

(2244) CARLSSON, J. 1965. ZOOGLEA-FORMING STREPTOCOCCI RESEMBLING STREPTOCOCCUS SANGUIS ISOLATED FROM DENTAL PLAQUE IN MAN. ODONTOL. REVY 16:348-358.

(2245) ------. 1968. A NUMERICAL TAXONOMIC STUDY OF ORAL STREPTOCOCCI. ODONTOL. REVY 19:137-160.

(2246) CLARKE, J. K. 1924. ON THE BACTERIAL FACTOR IN THE AETIOLOGY OF DENTAL CARIES. BR. J. EXP. PATHOL. 5:141-147.

(2247) DAHLQVIST, A., B. KRASSE, J. OLSSON, AND S. GARDELL. 1967. EXTRACELLULAR POLYSACCHARIDES FORMED BY CARIES - INDUCING STREPTOCOCCI. MONOSACCHARIDE COMPOSITION OF THE SUBSTRATE-SOLUBLE COMPONENT. HELV. ODONTOL. ACTA 11:15-21. ALSO IN CHEM. ABSTR. 1967. 67:30930D.

(2248) DE STOPPELAR, J. D., J. VAN HOUTE, AND C. E. DE MOOR. 1967. THE PRESENCE OF DEXTRAN-FORMING BACTERIA RESEMBLING STREPTOCOCCUS BOVIS AND STREPTOCOCCUS SANGUIS IN HUMAN DENTAL PLAQUE. ARCH. ORAL BIOL. 12:1199-1201.

(2249) FITZGERALD, R. J., AND H. V. JORDAN. 1968. POLYSACCHARIDE-PRODUCING BACTERIA AND CARIES. IN R. S. HARRIS, ED. ART AND SCIENCE OF DENTAL CARIES RESEARCH, PP. 79-86. ACADEMIC PRESS, INC., NEW YORK.

(2250) GIBBONS, R. J., K. BERMAN, S. KNOETTNER, AND B. KAPAIMATIS. 1966. DENTAL CARIES AND AVEOLAR BONE LOSS IN GNOTOBIOTIC RATS INFECTED WITH CAPSULE FORMING STREPTOCOCCI OF HUMAN ORIGIN. ARCH. ORAL BIOL. 11:549-560.

(2251) ------ AND S. B. BANGHART. 1968. INDUCTION OF DENTAL CARIES IN GNOTOBIOTIC RATS WITH A LEVAN FORMING STREPTOCOCCUS AND A STREPTOCOCCUS ISOLATED FROM SUBACUTE BACTERIAL ENDOCARDITIS. ARCH. ORAL BIOL. 13:297-308.

(2252) ROBRISH, S. A., AND M. I. KRICHEVSKY. 1972. ACID PRODUCTION FROM GLUCOSE AND SUCROSE BY GROWING CULTURES OF CARIES-CONDUCIVE STREPTOCOCCI. J. DENT. RES. 51:734-739.

(2253) SHKLAIR, I. L. 1975. STREPTOCOCCUS MUTANS: RELATIONSHIP TO DENTAL CARIES AND ATTEMPTS TO CONTROL IT IN THE HUMAN MOUTH. DEV. IND. MICROBIOL. 16:217-224.

(2254) SNYDER, M. L., H. M. HACKEDORN, D. O. MARTIN, AND D. D. JOHNSTON. 1955. THE SYNTHESIS OF MUCINOUS POLYSACCHARIDES FROM SUCROSE BY ORAL BACTERIA. J. DENT. RES. 34:368-379.

(2255) TANZER, J. M., W. I. WOOD, AND M. I. KRICHEVSKY. 1969. LINEAR GROWTH KINETICS OF PLAQUE-FORMING STREPTOCOCCI IN THE PRESENCE OF SUCROSE. J. GEN. MICROBIOL. 58:125-133.

(2256) ------, B. M. CHASSY, AND M. I. KRICHEVSKY. 1972. SUCROSE METABOLISM BY STREPTOCOCCUS MUTANS, SL-I. BIOCHIM. BIOPHYS. ACTA 261:379-387.

(2257) WHITE, J. C., AND C. F. NIVEN, JR. 1946. STREPTOCOCCUS S.B.E.: A STREPTOCOCCUS ASSOCIATED WITH SUBACUTE BACTERIAL ENDOCARDITIS. J. BACTERIOL. 51:717-722.

(2258) WOOD, J. M. 1969. THE STATE OF HEXOSE SUGAR IN HUMAN DENTAL PLAQUE AND ITS METABOLISM BY THE PLAQUE BACTERIA. ARCH. ORAL BIOL. 14:161-168.

SEE ALSO: 27 2326

B. Carbohydrates and other factors that influence growth and polysaccharide production

(2259) BOWEN, W. H. 1968. THE TRACE ELEMENT REQUIREMENTS OF CARIOGENIC AND NON-CARIOGENIC STREPTOCOCCI. ARCH. ORAL BIOL. 13:713-714.

(2260) ------. 1971. THE EFFECTS OF CALCIUM, MAGNESIUM AND MANGANESE ON DEXTRAN PRODUCTION BY A CARIOGENIC STREPTOCOCCUS. ARCH. ORAL BIOL. 16:115-119.

(2261) ------ AND M. J. HEWITT. 1974. EFFECT OF FLUORIDE ON EXTRACELLULAR POLYSACCHARIDE PRODUCTION BY STREPTOCOCCUS MUTANS. J. DENT. RES. 53:627-629.

(2262) ------. 1975. ROLE OF CARBOHYDRATES IN DENTAL CARIES. ACS SYMP. SER. 15:150-155.

(2263) CARLSSON, J., AND B. SUNDSTROM. 1968. VARIATIONS IN THE COMPOSITION OF EARLY DENTAL PLAQUE FOLLOWING INGESTION OF SUCROSE AND GLUCOSE. ODONTOL. REVY 19:161-169.

(2264) CRITCHLEY, P., J. M. WOOD, C. A. SAXTON, AND S. A. LEACH. 1967. THE POLYMERIZATION OF DIETARY SUGARS BY DENTAL PLAQUE. CARIES RES. 1:112-129.

(2265) DONAHUE, J. J., R. C. KESTENBAUM, AND W. J. KING. 1966. THE UTILIZATION OF SUGAR BY SELECTED STRAINS OF ORAL STREPTOCOCCI. INT. ASSOC. DENT. RES. 44TH GEN. MEET., 52- .

(2266) GIBBONS, R. J., AND S. B. BANGHART. 1968. VARIATION IN EXTRACELLULAR POLYSACCHRIDE SYNTHESIS BY CARIOGENIC STREPTOCOCCI. ARCH. ORAL BIOL. 13:697-701.

(2267) KEELE, B. B., JR., H. L. POWELL, JR., J. M. NAVIA, AND J. R. MCGHEE. 1971. EFFECTS OF ACTINOBOLIN ON GROWTH AND SOME METABOLIC ACTIVITIES OF CARIOGENIC STREPTOCOCCI IN VITRO AND IN VIVO. APPL. MICROBIOL. 22:957-962.

(2268) KRASSE, B. 1965. THE EFFECT OF CARIES-INDUCING STREPTOCOCCI IN HAMSTERS FED DIETS WITH SUCROSE OR GLUCOSE. ARCH. ORAL BIOL. 10:223-.

(2269) ROSEN, S. 1969. COMPARISON OF SUCROSE AND GLUCOSE IN THE CAUSATION OF DENTAL CARIES IN GNOTOBIOTIC RATS. ARCH. ORAL BIOL. 14:445-450.

(2270) SHAFER, W. G. 1949. THE CARIES-PRODUCING CAPACITY OF STARCH, GLUCOSE, AND SUCROSE DIETS IN THE SYRIAN HAMSTER. SCIENCE 110:143-144.

C. Dextransucrases and Glucosyl Transferases

Strain sources, preparation, purification, properties, and assay; factors that influence production and action.

(2271) BEELEY, J. A., AND P. M. AYRES. 1973. DEXTRANSUCRASE FROM STREPTOCOCCUS SANGUIS 804: CHARACTERIZATION OF THE PRODUCTS. BIOCHEM. SOC. TRANS. 1(6):1293-1296.

(2272) CARLSSON, J., E. NEWBRUN, AND B. KRASSE. 1969. PURIFICATION AND PROPERTIES OF DEXTRANSUCRASE FROM STREPTOCOCCUS SANGUIS. ARCH. ORAL BIOL. 14:469-478.

(2273) CHLUDZINSKI, A. M., G. R. GERMAINE, AND C. F. SCHACHTELE. 1974. PURIFICATION AND PROPERTIES OF DEXTRANSUCRASE FROM STREPTOCOCCUS MUTANS. J. BACTERIOL. 118:1-7.

(2274) CIARDI, J. E. 1976. GLUCOSYLTRANSFERASES OF STREPTOCOCCUS MUTANS. IMMUNOL. ABSTR. SPEC. SUPPL. ON IMMUNOL. ASPECTS OF DENTAL CARIES, PP. 101-110. LIBRARY OF CONGRESS CATALOG NUMBER 76-8119.

(2275) FUKUI, K., Y. FUKUI, AND T. MORIYAMA. 1974. PURIFICATION AND PROPERTIES OF DEXTRANSUCRASE AND INVERTASE FROM STREPTOCOCCUS MUTANS. J. BACTERIOL. 118:796-804.

(2276) ------, Y. FUKUI, AND T. MORIYAMA. 1974. ACCELERATION OF DEXTRANSUCRASE ACTIVITY OF STREPTOCOCCUS MUTANS BY SECRETORY IMMUNOGLOBULIN A. J. BACTERIOL. 118:805-809.

(2277) GERMAINE, G. R., A. M. CHLUDZINSKI, AND C. F. SCHACHTELE. 1974. STREPTOCOCCUS MUTANS DEXTRANSUCRASE: REQUIREMENT FOR PRIMER DEXTRAN. J. BACTERIOL. 120:287-294.

(2278) ------, C. F. SCHACHTELE, AND A. M. CHLUDZINSKI. 1974. RAPID FILTER PAPER ASSAY FOR THE DEXTRANSUCRASE ACTIVITY FROM STREPTOCOCCUS MUTANS. J. DENT. RES. 53:1355-1360.

(2279) ------ AND C. F. SCHACHTELE. 1976. STREPTOCOCCUS MUTANS DEXTRANSUCRASE: MODE OF INTERACTION WITH HIGH-MOLECULAR-WEIGHT DEXTRAN AND ROLE IN CELLULAR AGGREGATION. INFECT. IMMUN. 13:365-372.

(2280) GIBBONS, R. J., AND M. NYGAARD. 1968. SYNTHESIS OF INSOLUBLE DEXTRAN AND ITS SIGNIFICANCE IN THE FORMATION OF GELATINOUS DEPOSITS BY PLAQUE FORMING STREPTOCOCCI. ARCH. ORAL BIOL. 13:1249-1262.

(2281) ------ AND P. H. KEYES. 1969. INHIBITION OF INSOLUBLE DEXTRAN SYNTHESIS, PLAQUE FORMATION AND DENTAL CARIES IN HAMSTERS BY LOW MOLECULAR WEIGHT DEXTRAN. ARCH. ORAL BIOL. 14:721-724.

(2282) GUGGENHEIM, B., AND E. NEWBRUN. 1969. EXTRACELLULAR GLUCOSYL TRANSFERASE ACTIVITY OF AN HS STRAIN OF STREPTOCOCCUS MUTANS. HELV. ODONTOL. ACTA 13:84-97.

(2283) KELSTRUP, J., AND T. D. FUNDER-NIELSEN. 1972. ENZYME REACTIONS IN DENTAL PLAQUE MATRIX. MODIFICATION OF VELOCITY BY THE PRESENCE OF POLYMERS. ACTA ODONTOL. SCAND. 30:621-628.

(2284) KNUUTTILA, M. L. E., AND K. K. MAEKINEN. 1972. EFFECT OF MALTOSE ON POLYSACCHARIDE SYNTHESIS BY A CARIOGENIC STREPTOCOCCUS. J. DENT. RES. 51:674- .

(2285) KURAMITSU, H. K. 1974. CHARACTERIZATION OF CELL-ASSOCIATED DEXTRANSUCRASE ACTIVITY FROM GLUCOSE-GROWN CELLS OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 10:227-235.

(2286) MCCABE, M. M., AND E. E. SMITH. 1973. ORIGIN OF THE CELL-ASSOCIATED DEXTRANSUCRASE OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 7:829-838.

(2287) NEWBRUN, E., AND J. CARLSSON. 1969. REACTION RATE OF DEXTRANSUCRASE FROM STREPTOCOCCUS SANGUIS IN THE PRESENCE OF VARIOUS COMPOUNDS. ARCH. ORAL BIOL. 14:461-468.

(2288) ------. 1971. DEXTRANSUCRASE FROM STREPTOCOCCUS SANGUIS: FURTHER CHARACTERIZATION. CARIES RES. 5:124-134.

(2289) ------. 1972. EXTRACELLULAR POLYSACCHARIDES SYNTHESIZED BY GLUCOSYLTRANSFERASES OF ORAL STREPTOCOCCI. CARIES RES. 6:132-147.

(2290) ROBRISH, S. A., W. REID, AND M. I. KRICHEVSKY. 1972. DISTRIBUTION OF ENZYMES FORMING POLYSACCHARIDE FROM SUCROSE AND THE COMPOSITION OF EXTRACELLULAR POLYSACCHARIDE SYNTHESIZED BY STREPTOCOCCUS MUTANS. APPL. MICROBIOL. 24:184-190.

(2291) SCALES, W. R., L. W. LONG, AND J. R. EDWARDS. 1975. PURIFICATION AND CHARACTERIZATION OF A GLYCOSYLTRANSFERASE COMPLEX FROM THE CULTURE BROTH OF STREPTOCOCCUS MUTANS FA1. CARBOHYDR. RES. 42:325-338.

(2292) SCHACHTELE, C. F., A. E. LOKEN, AND D. J. KNUDSON. 1972. PREFERENTIAL UTILIZATION OF THE GLYCOSYL MOIETY OF SUCROSE BY A CARIOGENIC STRAIN OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 5:531-536.

(2293) ------, G. R. GERMAINE, AND S. K. HARLANDER. 1975. PRODUCTION OF ELEVATED LEVELS OF DEXTRANSUCRASE BY A MUTANT OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 12:934-937.

(2294) SHARMA, M. L., A. S. DHILLON, AND E. NEWBRUN. 1974. CELL-BOUND GLUCOSYLTRANSFERASE ACTIVITY OF STREPTOCOCCUS SANGUIS STRAIN 804. ARCH. ORAL BIOL. 19:1063-1072.

(2295) SPINELL, D. M., AND R. J. GIBBONS. 1974. INFLUENCE OF CULTURE MEDIUM ON THE GLUCOSYL TRANSFERASE- AND DEXTRAN-BINDING CAPACITY OF STREPTOCOCCUS MUTANS 6715 CELLS. INFECT. IMMUN. 10:1448-1451.

(2296) WOOD, J. M. 1967. A DEXTRANSUCRASE ACTIVITY FROM STREPTOCOCCUS FA-1. ARCH. ORAL BIOL. 12:1659-1660.

SEE ALSO: 2303 2320 2368 2501 2502 2515

D. Dextranases, Dextranglucosidase, Mutanase, and α-1,3-Glucanase(s)

Action on polysaccharides and on plaque.

(2297) BLOCK, P. L., C. L. DOOLEY, AND E. E. HOWE. 1969. THE RETARDATION OF SPONTANEOUS PERIODONTAL DISEASE AND THE PREVENTION OF CARIES IN HAMSTERS WITH DEXTRANASE. J. PERIODONTOL. PERIODONTICS 40:105-110.

(2298) BOWEN, W. H. 1968. EFFECTS OF DEXTRANASE ON CARIOGENIC AND NON-CARIOGENIC DEXTRANS. BR. DENT. J. 124:347-349.

(2299) ------. 1968. EFFECTS OF DEXTRANASE ON DEXTRANS PRODUCED BY CARIOGENIC AND NONCARIOGENIC STREPTOCOCCI. J. DENT. RES. 47:989-990.

(2300) ------. 1971. THE EFFECT OF DEXTRANASE ON CARIES ACTIVITY IN MONKEYS (MACACA IRUS). BR. DENT. J. 131:445-449.

(2301) CALDWELL, R. C., H. J. SANDHAM, W. V. MANN, JR. AND OTHERS. 1971. THE EFFECT OF A DEXTRANASE MOUTHWASH ON DENTAL PLAQUE IN YOUNG ADULTS AND CHILDREN. J. AM. DENT. ASSOC. 82:124-121.

(2302) DEWAR, M. D., AND G. J. WALKER. 1973. HYDROLYSIS OF ALPHA-1,3-GLUCOSIDIC LINKAGES BY EXTRACELLULAR ENZYMES OF CLADOSPORIUM RESINAE [ABSTRACT 26). J. DENT. RES. 52(3):573.

(2303) ------ AND G. J. WALKER. 1975. METABOLISM OF THE POLYSACCHARIDES OF HUMAN DENTAL PLAQUE. I. DEXTRANASE ACTIVITY OF STREPTOCOCCI, AND THE EXTRACELLULAR POLYSACCHARIDES SYNTHESIZED FROM SUCROSE. CARIES RES. 9:21-35.

(2304) EBISU, S., AND K. KATO. 1974. [AN ENZYME THAT DEGRADES THE INSOLUBLE GLUCAN OF STREPTOCOCCUS MUTANS] (IN JAPANESE). NIPPON SAIKINGAKU ZASSHI 29:39.

(2305) FITZGERALD, R. J., P. H. KEYES, T. H. STOUDT, AND D. M. SPINELL. 1968. THE EFFECTS OF A DEXTRANASE PREPARATION ON PLAQUE AND CARIES IN HAMSTERS: A PRELIMINARY REPORT. J. AM. DENT. ASSOC. 76:301-304.

(2306) ------, D. M. SPINELL, AND T. H. STOUDT. 1968. ENZYMATIC REMOVAL OF ARTIFICIAL PLAQUES. ARCH. ORAL BIOL. 13:125-128.

(2307) GEHRING, F. 1971. [ACTION OF DEXTRANASE ON EXTRACELLULAR POLYSACCHARIDE PRODUCED BY STREPTOCOCCI] (IN GERMAN). DTSCH. ZAHNAERZTL. Z. 26:483-489.

(2308) GUGGENHEIM, B., K. G. KOENIG, H. R. MUEHLEMANN, AND B. REGOLATI. 1969. EFFECT OF DEXTRANASE ON CARIES IN RATS HARBOURING AN INDIGENOUS CARIOGENIC BACTERIAL FLORA. ARCH. ORAL BIOL. 14:555-558.

(2309) ------ AND R. HALLER. 1972. PURIFICATION AND PROPERTIES OF AN ALPHA-(1,3) GLUCANOHYDROLASE FROM TRICHODERMA HARZIANUM. J. DENT. RES. 51(2)(PT. 1):394-402.

(2310) ------, B. REGOLATI, AND H. R. MUEHLEMANN. 1973. CARIES AND PLAQUE INHIBITION BY MUTANASE IN RATS. CARIES RES. 6:289-297.

(2311) ------ AND J. J. BURCKHARDT. 1974. ISOLATION AND PROPERTIES OF A DEXTRANASE FROM STREPTOCOCCUS MUTANS OMZ 176. HELV. ODONTOL. ACTA 18:101-113.

(2312) HAMADA, S., J. MIZUNO, Y. MURAYAMA, AND OTHERS. 1975. EFFECT OF DEXTRANASE ON THE EXTRACELLULAR POLYSACCHARIDE SYNTHESIS OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 12:1415-1425.

(2313) KEYES, P. H., M. A. HICKS, B. M. GOLDMAN, AND OTHERS. 1971. DISPERSION OF DEXTRANOUS BACTERIAL PLAQUES ON HUMAN TEETH WITH DEXTRANASE. J. AM. DENTAL. ASSOC. 82:136-141.

(2314) KOENIG, K. G., AND B. GUGGENHEIM. 1968. IN VIVO EFFECTS OF DEXTRANASE IN PLAQUE AND CARIES. HELV. ODONTOL. ACTA 12:48-55.

(2315) LOBENE, R. R. 1971. A CLINICAL STUDY OF THE EFFECT OF DEXTRANASE ON HUMAN DENTAL PLAQUE. J. AM. DENT. ASSOC. 82:132-135.

(2316) MURAYAMA, Y., H. WADA, H-O. HAYASHI, AND OTHERS. 1973. EFFECTS OF DEXTRANASE FROM SPICARIA VIOLACEAE (IFO 6120) ON THE POLYSACCHARIDES PRODUCED BY ORAL STREPTOCOCCI AND ON HUMAN DENTAL PLAQUE. J. DENT. RES. 52:658-667.

(2317) NEWBRUN, E., AND M. L. SHARMA. 1976. FURTHER STUDIES ON EXTRACELLULAR GLUCANS SYNTHESIZED BY GLUCOSYLTRANSFERASES OF ORAL STREPTOCOCCI. CARIES RES. 10:255-272.

(2318) PAUNIO, I. K., AND K. K. MAKINEN. 1970. PHOSPHATE-LIBERATING ACTIVITY OF A MOLD NEUTRAL-DEXTRANASE PREPARATION. ACTA ODONTOL. SCAN. 28:499-504. ALSO IN CHEM. ABSTR. 1971. 74:38555A.

(2319) REESE, E. T., A. H. MAGUIRE, AND F. W. PARRISH. 1972. ALPHA-1,3-GLUCANASES OF FUNGI AND THEIR RELATIONSHIP TO MYCODEXTRANASE. FERMENT. TECHNOL. TODAY PROC. INT. FERM. SYMP. 4TH, 735-742.

(2320) SCHACHTELE, C. F., A. E. LOKEN, AND M. K. SCHMITT. 1972. USE OF SPECIFICALLY LABELED SUCROSE FOR COMPARISON OF EXTRACELLULAR GLUCAN AND FRUCTAN METABOLISM BY ORAL STREPTOCOCCI. INFECT. IMMUN. 5:263-266.

(2321) ------, R. H. STAAT, AND S. K. HARLANDER. 1975. DEXTRANASES FROM ORAL BACTERIA. INHIBITION OF WATER-INSOLUBLE GLUCAN PRODUCTION AND ADHERENCE TO SMOOTH SURFACES BY STREPTOCOCCUS MUTANS. INFECT. IMMUN. 12:309-317.

(2322) STAAT, R. H., T. H. GAWRONSKI, AND C. F. SCHACHTELE. 1973. DETECTION AND PRELIMINARY STUDIES ON DEXTRANASE-PRODUCING MICROORGANISMS FROM HUMAN DENTAL PLAQUE. INFECT. IMMUN. 8:1009-1016.

(2323) ------ AND C. F. SCHACHTELE. 1974. EVALUATION OF DEXTRANASE PRODUCTION BY THE CARIOGENIC BACTERIUM STREPTOCOCCUS MUTANS. INFECT. IMMUN. 9:467-469.

(2324) ------ AND C. F. SCHACHTELE. 1975. CHARACTERIZATION OF A DEXTRANASE PRODUCED BY AN ORAL STRAIN OF ACTINOMYCES ISRALII. INFECT. IMMUN. 12:556-563.

SEE ALSO: 283 THROUGH 359 1621 2356 2507
PATENT SECTION XXIX C

E. Extracellular Polysaccharides of Cariogenic Bacteria

Composition, properties, morphology, and structure in relation to bilogical role.

(2325) BAIRD, J. K., V. M. C. LONGYEAR, AND D. C. ELLWOOD. 1973. WATER INSOLUBLE AND SOLUBLE GLUCANS PRODUCED BY EXTRACELLULAR GLYCOSYLTRANSFERASES FROM STREPTOCOCCUS MUTANS. MICROBIOS 8:143-150.

(2326) DONKERSLOOT, J. A., H. A. DE LEON, B. M. CHASSY, AND M. I. KRICHEVSKY. 1976. ANALYSIS OF THE EXUDATE PRODUCED BY STREPTOCOCCUS MUTANS SL-1 COLONIES ON SUCROSE-CONTAINING AGAR MEDIA. APPL. ENVIRON. MICROBIOL. 32:448-450.

(2327) GUGGENHEIM, B., AND H. E. SCHROEDER. 1967. BIOCHEMICAL AND MORPHOLOGICAL ASPECTS OF EXTRACELLULAR POLYSACCHARIDES PRODUCED BY CARIOGENIC STREPTOCOCCI. HELV. ODONT. ACTA 11:131-152.

(2328) ------. 1970. ENZYMATIC HYDROLYSIS AND STRUCTURE OF WATER-INSOLUBLE GLUCAN PRODUCED BY GLUCOTRANSFERASES FROM A STRAIN OF STREPTOCOCCUS MUTANS. HELV. ODONTOL. ACTA SUPPL. 5, 14:89-108.

(2329) HAMMOND, B. F. 1969. DEXTRAN PRODUCTION BY A HUMAN ORAL STRAIN OF LACTOBACILLUS CASEI. ARCH. ORAL BIOL. 14:879-890.

(2330) IACONO, V. J., M. A. TAUBMAN, D. J. SMITH, AND OTHERS. 1976. STRUCTURE AND FUNCTION OF THE TYPE-SPECIFIC POLYSACCHARIDE OF STREPTOCOCCUS MUTANS 6715. IMMUNOL. ABSTR. SPEC. SUPPL. ON IMMUNOL. ASPECTS OF DENTAL CARIES, PP. 75-90. LIBRARY OF CONGRESS CATALOG NUMBER 76-8119.

(2331) MELVAER, K. L., K. HELGELAND, AND G. ROELLA. 1974. A CHARGED COMPONENT IN PURIFIED POLYSACCHARIDE PREPARATIONS FROM STREPTOCOCCUS MUTANS AND STREPTOCOCCUS SANGUIS. ARCH. ORAL BIOL. 19:589-595.

(2332) NEWBRUN, E., R. LACY, AND T. M. CHRISTIE. 1971. THE MORPHOLOGY AND SIZE OF THE EXTRACELLULAR POLYSACCHARIDES FROM ORAL STREPTOCOCCI. ARCH. ORAL BIOL. 16:863-872.

(2333) WOOD, J. M., AND P. CRITCHLEY. 1966. THE EXTRACELLULAR POLYSACCHARIDE PRODUCED FROM SUCROSE BY A CARIOGENIC STREPTOCOCCUS. ARCH. ORAL BIOL. 11:1039-1042.

SEE ALSO: 532 534 544 546 561 566 2317

F. Cell Agglutination, Adhesion, and Cohesion

(2334) FREEDMAN, M. L., AND J. M. TANZER. 1974. DISSOCIATION OF PLAQUE FORMATION FROM GLUCAN-INDUCED AGGLUTINATION IN MUTANTS OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 10:189-196.

(2335) GIBBONS, R. J., AND R. J. FITZGERALD. 1969. DEXTRAN-INDUCED AGGLUTINATION OF STREPTOCOCCUS MUTANS, AND ITS POTENTIAL ROLE IN THE FORMATION OF MICROBIAL DENTAL PLAQUES. J. BACTERIOL. 98:341-346.

(2336) ------ AND M. NYGAARD. 1970. INTERBACTERIAL AGGREGATION OF PLAQUE BACTERIA. ARCH. ORAL BIOL. 15:1397-1400.

(2337) GUGGENHEIM, B., AND H. E. SCHROEDER. 1967. BIOCHEMICAL AND MORPHOLOGICAL ASPECTS OF EXTRACELLULAR POLYSACCHARIDES PRODUCED BY CARIOGENIC STREPTOCOCCI. HELV. ODONTOL. ACTA 11:131-152.

(2338) JOHNSON, M. C., J. J. BOZZOLA, AND I. L. SHECHMEISTER. 1974. MORPHOLOGICAL STUDY OF STREPTOCOCCUS MUTANS AND TWO EXTRACELLULAR POLYSACCHARIDE MUTANTS. J. BACTERIOL. 118:304-311.

(2339) KELSTRUP, J., AND T. D. FUNDER-NIELSEN. 1972. MOLECULAR INTERACTIONS BETWEEN THE EXTRACELLULAR POLYSACCHARIDES OF STREPTOCOCCUS MUTANS. ARCH. ORAL BIOL. 17:1659-1670.

(2340) ------ AND T. D. FUNDER-NIELSEN. 1974. ADHESION OF DEXTRAN TO STREPTOCOCCUS MUTANS. J. GEN. MICROBIOL. 81:485-489.

(2341) KURAMITSU, H. K. 1974. ADHERENCE OF STREPTOCOCCUS MUTANS TO DEXTRAN SYNTHESIZED IN THE PRESENCE OF EXTRACELLULAR DEXTRANSUCRASE. INFECT. IMMUN. 9:764-765.

(2342) MCBRIDE, B. C., AND G. BORGEAU. 1975. DEXTRAN-INDUCED AGGREGATION OF ACTINOMYCES VISCOSUS. ARCH. ORAL BIOL. 20:837-842.

(2343) MCCABE, M. M., AND E. E. SMITH. 1975. RELATION BETWEEN CELL-BOUND DEXTRANSUCRASE AND THE AGGLUTINATION OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 12:512-520.

(2344) ------ AND E. E. SMITH. 1976. CARBOHYDRATE RECEPTORS OF ORAL STREPTOCOCCI. IMMUNOL. ABSTR. SPEC. SUPPL. ON IMMUNOL. ASPECTS OF DENTAL CARIES, PP. 111-120. LIBRARY OF CONGRESS CATALOG NUMBER 76-8119.

(2345) MCGAUGHLEY, C., B. D. FIELD, AND E. C. STOWELL. 1971. EFFECTS OF SALIVARY PROTEINS ON THE ADSORPTION OF CARIOGENIC STREPTOCOCCI BY HYDROXYAPATITE. J. DENT. RES. 50:917-922.

(2346) MUKASA, H., AND H. D. SLADE. 1973. MECHANISM OF ADHERENCE OF STREPTOCOCCUS MUTANS TO SMOOTH SURFACES. I. ROLES OF INSOLUBLE DEXTRAN-LEVAN SYNTHETASE ENZYMES AND CELL WALL POLYSACCHARIDE IN PLAQUE FORMATION. INFECT. IMMUN. 8:555-562.

(2347) ------ AND H. D. SLADE. 1974. MECHANISM OF ADHERENCE OF STREPTOCOCCUS MUTANS TO SMOOTH SURFACES. II. NATURE OF THE BINDING SITE AND THE ADSORPTION OF DEXTRAN-LEVAN SYNTHETASE ENZYMES ON THE CELL-WALL SURFACE OF THE STREPTOCOCCUS. INFECT. IMMUNITY 9:419-429.

(2348) ------ AND H. D. SLADE. 1974. MECHANISM OF THE ADHERENCE OF STREPTOCOCCUS MUTANS TO SMOOTH SURFACES. III. PURIFICATION AND PROPERTIES OF THE ENZYME COMPLEX RESPONSIBLE FOR ADHERENCE. INFECT. IMMUN. 10:1135-1145.

(2349) NALBANDIAN, J., M. L. FREEDMAN, J. M. TANZER, AND S. M. LOVELACE. 1974. ULTRASTRUCTURE OF MUTANTS OF STREPTOCOCCUS MUTANS WITH REFERENCE TO AGGLUTINATION, ADHESION, AND EXTRACELLULAR POLYSACCHARIDE. INFECT. IMMUN. 10:1170-1179.

SEE ALSO: 37 2266 2279 2321 2371 2372

G. Polysaccharides in Plaque

(2350) GIBBONS, R. J., AND S. B. BANGHART. 1967. SYNTHESIS OF EXTRACELLULAR DEXTRAN BY CARIOGENIC BACTERIA AND ITS PRESENCE IN HUMAN DENTAL PLAQUE. ARCH. ORAL BIOL. 12:11-24.

(2351) ------. 1968. FORMATION AND SIGNIFICANCE OF BACTERIAL POLYSACCHARIDES IN CARIES ETIOLOGY. CARIES RES. 2:164-171.

(2352) ------. 1968. ROLE OF EXTRACELLULAR BACTERIAL POLYSACCHARIDES IN THE CARIES PROCESS. J. DENT. RES. 47:926-927.

(2353) HOTZ, P., B. GUGGENHEIM, AND R. SCHMID. 1972. CARBOHYDRATES IN POOLED DENTAL PLAQUE. CARIES RES. 6:103-121.

(2354) KEYES, P. H. 1968. RESEARCH IN DENTAL CARIES. J. AM. DENT. ASSOC. 76:1357-1373.

(2355) MCCABE, R. M., P. H. KEYES, AND A. HOWELL. 1967. AN IN VITRO METHOD FOR ASSESSING THE PLAQUE FORMING ABILITY OF ORAL BACTERIA. ARCH. ORAL BIOL. 12:1653-1656.

(2356) NYMAN, S., J. LINDHE, AND J-C. JANSON. 1972. THE EFFECT OF A BACTERIAL DEXTRANASE ON HUMAN DENTAL PLAQUE FORMATION AND GINGIVITIS DEVELOPMENT. ODONTOL. REVY 23:243-252.

(2357) PARKER, R. B., AND H. R. CREAMER. 1971. CONTRIBUTION OF PLAQUE POLYSACCHARIDES TO GROWTH OF CARIOGENIC MICROORGANISMS. ARCH. ORAL BIOL. 16:855-862.

(2358) POOLE, D. F. G., AND H. N. NEWMAN. 1971. DENTAL PLAQUE AND ORAL HEALTH. NATURE (LONDON) 234:329-331.

(2359) TANZER, J. M., M. L. FREEDMAN, R. J. FITZGERALD, AND R. H. LARSON. 1974. DIMINISHED VIRULENCE OF GLUCAN SYNTHESIS-DEFECTIVE MUTANTS OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 10:197-203.

(2360) WOOD, J. M. 1967. THE AMOUNT, DISTRIBUTION, AND METABOLISM OF POLYSACCHARIDES IN HUMAN DENTAL PLAQUE. ARCH. ORAL BIOL. 12:849-858.

(2361) ------ AND P. CRITCHLEY. 1967. THE SOLUBLE CARBOHYDRATES OF THE PLAQUE MATRIX. J. DENT. RES. 46:129-130.

SEE ALSO: 1024 1589

H. Immunology

(2362) CARLSSON, J., AND B. KRASSE. 1968. INHIBITION OF STREPTOCOCCAL DEXTRANSUCRASE BY SERA OF RABBITS INFECTED WITH STREPTOCOCCUS SANGUIS. ARCH. ORAL BIOL. 13:849-852.

(2363) EVANS, R. T., AND R. J. GENCO. 1973. INHIBITION OF GLUCOSYLTRANSFERASE ACTIVITY BY ANTISERA TO KNOWN SEROTYPES OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 7:237-241.

(2364) FUKUI, K., Y. FUKUI, AND T. MORIYAMA. 1974. SOME IMMUNOCHEMICAL PROPERTIES OF DEXTRANSUCRASE AND INVERTASE FROM STREPTOCOCCUS MUTANS. INFECT. IMMUN. 10:985-990.

(2365) HAYASHI, J. A., I. L. SHKLAIR, AND A. N. BAHN. 1972. IMMUNIZATION WITH DEXTRANSUCRASE AND GLYCOSIDIC HYDROLASES. J. DENT. RES. 51:436-442.

(2366) KENNEDY, A. E., I. L. SHKLAIR, J. A. HAYASHI, AND A. N. BAHN. 1968. ANTIBODIES TO THE CARIOGENIC STREPTOCOCCI IN HUMANS. ARCH. ORAL BIOL. 13:1275-1278.

(2367) LINZER, R. 1976. SEROTYPE POLYSACCHARIDE ANTIGENS OF STREPTOCOCCUS MUTANS: COMPOSITION AND SEROLOGICAL CROSS-REACTIONS. IMMUNOL. ABSTR. SPEC. SUPPL. ON IMMUNOL. ASPECTS OF DENTAL CARIES, PP. 91-100. LIBRARY OF CONGRESS CATALOG NUMBER 76-8119.

(2368) ------ AND H. D. SLADE. 1976. CHARACTERIZATION OF AN ANTIGLUCOSYLTRANSFERASE SERUM SPECIFIC FOR INSOLUBLE GLUCAN SYNTHESIS BY STREPTOCOCCUS. INFECT. IMMUN. 13:494-500.

(2369) MICHALEK, S. M., J. R. MCGHEE, J. MESTECKY, AND OTHERS. 1976. INGESTION OF STREPTOCOCCUS MUTANS INDUCES SECRETORY IMMUNOGLOBULIN A AND CARIES IMMUNITY. SCIENCE 192:1238-1240.

(2370) MUKASA, H., AND H. D. SLADE. 1973. EXTRACTION, PURIFICATION, AND CHEMICAL AND IMMUNOLOGICAL PROPERTIES OF THE STREPTOCOCCUS MUTANS GROUP 'A' POLYSACCHARIDE CELL WALL ANTIGEN. INFECT. IMMUN. 8:190-198.

(2371) OLSON, G. A., A. S. BLEIWEIS, AND P. A. SMALL, JR. 1972. ADHERENCE INHIBITION OF STREPTOCOCCUS MUTANS: AN ASSAY REFLECTING A POSSIBLE ROLE OF ANTIBODY IN DENTAL CARIES PROPHYLAXIS. INFECT. IMMUN. 5:419-427.

(2372) ------, B. GUGGENHEIM, AND P. A. SMALL, JR. 1974. ANTIBODY-MEDIATED INHIBITION OF DEXTRAN/SUCROSE-INDUCED AGGLUTINATION OF STREPTOCOCCUS MUTANS. INFECT. IMMUN. 9:273-278.

(2373) ROSEN, S., AND A. N. BAHN. 1975. IMMUNIZATION AGAINST DENTAL CARIES: A REVIEW. DEV. IND. MICROBIOL. 16:225-230.

XXIV. Industrial uses

A. Cane and Beet Sugar and Wine Industries

(2374) APPLING, J. W., AND I. WARNER. 1959. MICROORGANISM CONTROL IN CUBAN SUGAR MILLS. SUGAR J. 22(8):19-27.

(2375) BELVAL, H. 1944. [THE COMPLEX POLYOSES OF SUGAR BEETS: DEXTRAN AND FRUCTOSAN] (IN FRENCH). PUB. INST. BELGE AMELIOR. BETTERAVE 12:31-53. ALSO IN CHEM. ABSTR. 1946. 40:3631.

(2376) BRUIJN, J. 1966. DETERIORATION OF SUGAR CANE AFTER HARVESTING. PART I. CHANGES IN JUICE COMPOSITION. INT. SUGAR J. 68:331-334.

(2377) ------. 1966. DETERIORATION OF SUGAR CANE AFTER HARVESTING. PART II. INVESTIGATION OF THE POLYSACCHARIDE FORMED. INT. SUGAR J. 68:356-358.

(2378) CLONINGER, C. K. 1967. CONTROL OF MICROORGANISMS. SUGAR J. 30(5):17-19.

(2379) CROSS, W. E. 1966. THE PROBLEM OF FROZEN CANE IN THE ARGENTINE. SUGAR J. 28(10):8-14.

(2380) DAVIS, C. W. 1959. FILTERABILITY OF RAW SUGAR. INT. SUGAR J. 61:300-302; 331-333.

(2381) DEDEK, J. 1962. ADSORPTION OF SEVERAL NONSUGAR COMPOUNDS ON CALCIUM CARBONATE. ZUCKER 12(1):14-16. ALSO IN CHEM. ABSTR. 1962. 56:13146C.

(2382) DELAGE, J. C. 1925. [EFFECT OF DEXTRAN ON WHITE WINES MADE FROM MUSTS AFFECTED BY BOTRYTIS (NOBLE ROT)] (IN FRENCH). CHIM. IND. SPEC. NUMBER 592-600. ALSO IN CHEM. ABSTR. 1926. 20:475.

(2383) EGAN, B. T. 1965. THE INFECTION PROCESS IN SOUR STORAGE ROT. PROC. QUEENSL. SOC. SUGAR CANE TECHNOL. 32:21-24.

(2384) ------. 1968. POST-HARVEST DETERIORATION LOSSES IN SUGAR CANE IN QUEENSLAND. PROC. INT. SOC. SUGAR CANE TECHNOL. 13TH, TIAWAN.

(2385) IMRIE, F. K. E., AND R. H. TILBURY. 1972. POLYSACCHARIDES IN SUGAR CANE AND ITS PRODUCTS. (A REVIEW.) SUGAR TECHNOL. REV. 1(4):291-361.

(2386) JAMES, G. P., AND J. M. CAMERON. 1971. THE INFLUENCE OF DETERIORATED CANE ON RAW SUGAR FILTERABILITY. PROC. QUEENSL. SOC. SUGAR CANE TECHNOL. 38:247-249.

(2387) ------. 1972. DEPRESSING EFFECT OF DETERIORATED CANE ON RAW SUGAR FILTERABILITY. PROC. QUEENSL. SOC. SUGAR CANE TECHNOL. 39:275-277.

(2388) KENIRY, J. S., J. B. LEE, AND C. W. DAVIS. 1967. DETERIORATION OF MECHANICALLY HARVESTED CHOPPED-UP CANE. PART I. DEXTRAN - A PROMISING QUANTITATIVE INDICATOR OF THE PROCESSING QUALITY OF CHOPPED-UP CANE. INT. SUGAR J. 69:330-333.

(2389) ------, J. B. LEE, AND C. W. DAVIS. 1967. DETERIORATION OF MECHANICALLY HARVESTED CHOPPED-UP CANE. PART II. THE RATE OF DEXTRAN FORMATION. INT. SUGAR J. 69:357-360.

(2390) KEYWORTH, C. M. 1925. A SHORT REPORT ON THE REFINING OF SUGAR. CHEM. IND. (LONDON) (44):723-725.

(2391) KONN, V. 1930. [THE EFFECT OF FERMENTATION PRODUCTS OF LEUCONOSTOC MESENTEROIDES UPON THE CLARIFICATION OF SUGAR LIQUORS] (IN CZECHOSLOVAKIAN). LISTY CUKROV. 48:563-570. ALSO IN CHEM. ABSTR. 1930. 24:4949.

(2392) ------. 1930. [THE EFFECT OF THE PRODUCTS OF DEXTRAN FERMENTATION (LEUCONOSTOC MESENTERIODES) UPON DEFECATION AND SATURATION OF (BEET SUGAR) JUICES] (IN CZECHOSLVOKIAN). Z. ZUCKERIND. CECH. REPUB. 55:131-139. ALSO IN CHEM. ABSTR. 1931. 25:5789.

(2393) LEONARD, G. J., AND G. N. RICHARDS. 1969. POLYSACCHARIDES AS CAUSAL AGENTS IN PRODUCTION OF ELONGATED SUCROSE CRYSTALS FROM CANE JUICE. INT. SUGAR J. 71:263-267.

(2394) MCCALIP, M. A., AND H. H. HALL. 1939. EFFECT ON FACTORY CANE JUICES AND SIRUPS OF LEUCONOSTOC MESENTEROIDES ISOLATED FROM FROST DAMAGED LOUISIANA SUGAR CANE OF THE 1937 CROP. PROC. INT. SUGAR CANE TECHNOL. 986-1004.

(2395) NICHOLSON, R. I., AND B. LILIENTHAL. 1959. FORMATION OF A POLYSACCHARIDES IN SUGAR-CANE. AUST. J. BIOL. SCI. 12:192-203. ALSO IN CHEM. ABSTR. 1959. 53:16567E.

(2396) OLDFIELD, J. F. T., J. V. DUTTON, AND H. J. TEAGUE. 1971. THE SIGNIFICANCE OF INVERT AND GUM FORMATION IN DETERIORATED BEET. INT. SUGAR J. 73(865):3-8.

(2397) OWEN, W. L. 1948. THE PRODUCTION OF GUM DEXTRAN: INDUSTRIAL POSSIBILITIES OF UTILIZING RAW SUGARS IN A FERMENTATION PROCESS...PRODUCT ADAPTABLE TO WIDE VARIETY OF INDUSTRIAL USES. SUGAR 43(8):28-29.

(2398) ------. 1950. GUM DEXTRAN AS A PROFITABLE BY-PRODUCT OF THE CANE SUGAR INDUSTRY. SUGAR 45(3):42-43.

(2399) ------. 1951. DEXTRAN AS A SUGAR INDUSTRY BY-PRODUCT. III. ITS VERSATILITY FOR INDUSTRIAL USE. SUGAR 46(2):40-41.

(2400) ------. 1954. BLUEPRINT FOR MOLASSES SURPLUSES. SUGAR 49(5):56-57.

(2401) ------. 1955. PRODUCTION OF INDUSTRIAL DEXTRAN SEEN AS PROMISING OUTLET FOR SURPLUS SUCROSE. SUGAR 50(5):47-48, 64.

(2402) ------. 1956. INDUSTRIAL DEXTRAN AS A VERSATILE OUTLET FOR SURPLUS SUGAR BEETS. AUST. SUGAR J. 47:875-879.

(2403) RICHARDS, G. N., AND P. N. STEWART. 1974. CONTRIBUTION OF SOLUBLE AND INSOLUBLE COMPONENTS TO RAW SUGAR FILTERABILITY. PROC. QUEENSL. SOC. SUGAR CANE TECHNOL. 41:229-234.

(2404) SUTHERLAND, D. N. 1968. DEXTRAN AND CRYSTAL ELONGATION. INT. SUGAR J. 70:355-358.

(2405) ------ AND N. PATON. 1969. DEXTRAN AND CRYSTAL ELONGATION: FURTHER EXPERIMENTS. INT. SUGAR J. 71:131-135.

(2406) SUTHERLAND, G. K. 1960. THE POLYSACCHARIDES PRESENT IN SUGAR-MILL SIRUPS. AUST. J. BIOL. SCI. 13:300-306. ALSO IN CHEM. ABSTR. 1961. 55:1038I.

(2407) TANTAOUI, M. 1952. DEXTRAN: ITS EFFECT ON POLARIZATION AND TRUE SUGAR DETERMINATION IN SUGAR JUICE. SUGAR J. 15:36-38.

(2408) TAYLOR, G. C. 1895. DEXTRAN: ONE OF THE GUMS OF OUR SUGAR HOUSE. LOUISIANA SUGAR EXP. STATION BULL. 38:1334-1340.

(2409) TESCHNER, F., AND H. AHLERS. 1959. [JUICE PURIFICATION] (IN GERMAN). ZUCKERERZEUGUNG 3:217-220. ALSO IN CHEM. ABSTR. 1964. 60:3184E.

(2410) TILBURY, R. H. 1968. BIODETERIORATION OF HARVESTED SUGAR CANE. IN A. H. WALTERS AND J. J. ELPHICK, EDS. BIODETERIORATION OF MATERIALS: MICROBIOLOGICAL AND ALLIED ASPECTS, PP. 717-730. ELSEVIER PUBLISHING CO. LTD., AMSTERDAM, LONDON, NEW YORK.

(2411) VASSEUR, A. 1924. [PRESENCE OF DEXTRAN IN WINES, AND ITS CONSEQUENCES] (IN FRENCH). REV. PATHOL. COMP. HYG. GEN. 24:240. ALSO IN CHEM. ABSTR. 1925. 19:374.

(2412) VUKOV, K. 1956. [EXAMINATION OF THE ROLE OF PECTIN AND DEXTRAN IN THE FILTRATION OF SUGAR FACTORY SOLUTIONS] (IN HUNGARIAN). CUKORIP. KUTATOINTEZ. KOZL. 3:52-57. ALSO IN ACTA CHIM. ACAD. ACI HUNG. 1957. 13:71-82 AND ABSTRACTED IN INT. SUGAR J. 1957. 59:253.

(2413) ------. 1957. [EFFECTS OF DEXTRAN ON THE FILTERABILITY OF BEET SUGAR SOLUTIONS] (IN HUNGARIAN). ELELMCZ. IPAR 11:91-94. ALSO IN CHEM. ABSTR. 1959. 53:20861B.

(2414) ------. 1958. [PECTINS AND DEXTRANS IN SUGAR FACTORY JUICES] (IN GERMAN). Z. ZUCKERIND. 8:14-17. ALSO IN CHEM. ABSTR. 1958. 52:7746E.

(2415) VIGH, A., AND K. VUKOV. 1967. [EFFECT OF THE PECTIN AND INVERT SUGAR CONTENT OF THE RAW JUICE ON THE PHYSICAL PROPERTIES OF THE FIRST CARBONATION JUICE] (IN HUNGARIAN). CUKORIPAR 20(5):163-164. ALSO IN CHEM. ABSTR. 1968. 68:41276S.

(2416) WALTON, C. F., JR., AND C. A. FORT. 1931. MANNITE AND DEXTRAN IN THE JELLYING OF MOLASSES FROM JUICE OF FROZEN AND DETERIORATED CANE. IND ENG. CHEM. 23:1295-1297.

(2417) WEBER, G. R., AND F. D. MILLER. 1962. SWEETENED FEEDS: PROCEDURE FOR DETERMINING GELLING CHARACTERISTICS OF MOLASSES IN THE PRESENCE OF PHOSPHATES. J. ASSOC. OFF. AGRIC. CHEM. 45(4):916-918.

(2418) WIGGINS, L. F. 1957. CHEMISTRY AND THE SUGAR CANE. INT. SUGAR J. 59:94-97.

(2419) WILLENBERG, W. 1953. [DEXTRAN, A PROCESSED PRODUCT OF SUGAR] (IN GERMAN). ZUCKER 6:33-36. ALSO IN CHEM. ABSTR. 1953. 47:4637B.

(2420) YAMANE, T., K. SUZUKI, AND T. KAGA. 1965. FILTRATION-IMPEDING MATERIALS IN RAW SUGARS OF VARIOUS ORIGINS. INT. SUGAR J. 67:333-337.

SEE ALSO: 317 323 333 646 1039 THROUGH 1048 2486 2487

B. Food Industry

(2421) ADRIANO, F. T., S. B. OLIVEROS, AND E. R. VILLANUEVA. 1933. PREPARATION OF NATA DE PINA. PHILIPPINES J. ED. 16(7):373-379.

(2422) ANONYMOUS. 1953. ENZYMES SYNTHESIZED STABILIZER FROM SUCROSE. FOOD PROC. 14(6):2.

(2423) ------. 1958. GUIDE TO SUCCESSFUL PREPARATION OF NATA DE COCO. TYPED MANUSCRIPT FROM DIVISION OF BIOLOGICAL RESEARCH, INSTITUTE OF SCIENCE AND TECHNOLOGY, MANILA, PHILIPPINES.

(2424) BETHENCOURT, G. F. 1968. DEXTRAN AS AN AGENT TO RETARD STALENESS OF BREAD. IND. ALIMENT. (HAVANA) 1(2):36-39. ALSO IN CHEM. ABSTR. 1969. 70:66915D.

(2425) FOOD AND DRUG ADMINISTRATION. 1972. FOOD ADDITIVES PERMITTED IN FOOD FOR HUMAN CONSUMPTION: MOLECULAR SIEVE RESINS. (USE IN FINAL PURIFICATION OF PARTIALLY DELACTOSED WHEY.) FED. REGIST. 37(226):24816.

(2426) GLICKSMAN, M. 1969. GUM TECHNOLOGY IN THE FOOD INDUSTRY. (DEXTRAN, PP. 335-341.) ACADEMIC PRESS, NEW YORK AND LONDON. 590 PP.

(2427) JEANES, A. 1974. EXTRACELLULAR MICROBIAL POLYSACCHARIDES: NEW HYDROCOLLOIDS OF INTEREST TO THE FOOD INDUSTRY. FOOD TECHNOL. 28(5):34-40.

(2428) KOSINSKI, K. 1955. [BY-PRODUCTS OF DEXTRAN FERMENTATION] (IN POLISH). PRZEM. SPOZYW. 9:479-480. ALSO IN CHEM. ABSTR. 1956. 50:15019E.

(2429) MORR, C. V., D. B. KENKARE, AND I. A. GOULD. 1964. FRACTIONATION OF SKIN MILK PROTEINS BY SEPHADEX GEL FILTRATION. J. DAIRY SCI. 47:621-625.

(2430) ------, M. A. NIELSEN, AND S. T. COULTER. 1967. CENTRIFUGAL SEPHADEX PROCEDURE FOR FRACTIONATION OF CONCENTRATED SKIMMILK, WHEY, AND SIMILAR BIOLOGICAL SYSTEMS. J. DAIRY SCI. 50:305-306.

(2431) ------, S. T. COULTER, AND R. JENNESS. 1968. COMPARISON OF COLUMN AND CENTRIFUGAL SEPHADEX METHODS FOR FRACTIONATING WHEY AND SKIMMILK SYSTEMS. J. DAIRY SCI. 51:1155-1160.

(2432) OLIVEROS, S. B. 1935. HOW TO MAKE NATA DE PINA. AGRIC. LIFE 2(7):19-22.

(2433) SYMES, E. L. 1957. LEVULOSE AND DEXTRAN - CUBA STUDIES SUGAR DERIVATIVES. SUGAR J. 20(3):69.

SEE ALSO: 894 1292 1298 1312 1513 2504
PATENT SECTION XXXIII

C. Petroleum and Metal Production

(2434) GRIMES. J. H., AND K. T. B. SCOTT. 1968. METAL POWDER PRODUCTION BY THE GEL-PRECIPITATION PROCESS. POWDER METALL. 11(22):213-223. ALSO IN CHEM. ABSTR. 1969. 70:39905U.

(2435) ------ AND K. T. B. SCOTT. 1971. PRODUCTION OF FERROUS METAL POWDERS BY GEL PRECIPITATION. FALL POWDER METALL. CONF. PROC. 1-20. ALSO IN CHEM. ABSTR. 1971. 75:24244G.

(2436) HARDY, C. J. 1968. SOL-GEL AND GEL-PRECIPITATION PROCESSES. SOL GEL PROCESS CERAM. NUCL. FUELS PROC. PANEL 33-42. ALSO IN CHEM. ABSTR. 1969. 71:44778E.

(2437) HEYNE, B., AND A. GABERT. 1969. [THERMAL DEGRADATION OF DEXTRAN IN SOLUTIONS WITH SPECIAL REFERENCE TO DEEP-DRILLING MUDS] (IN GERMAN). BERGAKADEMIE 21(5):285-288. ALSO IN CHEM. ABSTR. 1969. 71:62733R.

(2438) KLIPP, W. 1965. [PRACTICAL TESTING OF DEXTRAN AS A PROTECTIVE COLLOID IN DRILLING MUDS] (IN GERMAN). PR. VYSK. USTAVU CS. NAFT DOLU 224(2):43-53. ALSO IN CHEM. ABSTR. 67:55857Y.

(2439) ------. 1968. [LABORATORY AND FIELD EXPERIENCE WITH DRILLING MUDS AT HIGH BOTTOM TEMPERATURES] (IN GERMAN). VORTR. GEOCHEM. CHEM. PHYS. PROBL. ERDOEL ERDGAS ERKUNDUNG FOERDER. INT. WISS. KONF. 2:49-63. ALSO IN CHEM. ABSTR. 1970. 72:57391U.

(2440) MCKINLEY, R. M., H. O. JAHNS, W. W. HARRIS, AND R. A. GREENKORN. 1966. NON-NEWTONIAN FLOW IN POROUS MEDIA. AICHE J. 12(1):17-20. ALSO IN CHEM. ABSTR. 64:13946C.

(2441) MONAGHAN, P. H., AND J. L. GIDLEY. 1959. HIGH-CALCIUM DRILLING FLUID TO STOP SHALE HYDRATION. OIL GAS J. 57(16):100-103.

(2442) MUELLER, E. P. 1963. [DEVELOPMENT AND USE OF DEXTRAN AS A PROTECTIVE COLLOID FOR DRILLING MUDS] (IN GERMAN). Z. ANGEW. GEOL. 9(4):213-217. ALSO IN CHEM. ABSTR. 1963. 59:4935A.

(2443) OWEN, W. L. 1950. DEXTRAN AS A PREVENTIVE OF WATER LOSS IN OIL WELL DRILLING MUDS. SUGAR 45(11):35-37.

(2444) ------. 1950. DEXTRAN AS PREVENTIVE OF WATER LOSS IN OIL WELL DRILLING MUD. WORLD PET. 21(13):44-46.

(2445) ------. 1951. DEXTRAN AS A PREVENTIVE OF WATER LOSS IN OIL WELL DRILLING MUDS. II. SUGAR 46(7):28-30.

(2446) ------. 1952. FURTHER TESTS OF DEXTRAN IN OIL WELLS. SUGAR 47(7):50-51.

(2447) ------. 1953. RESISTANCE OF MODIFIED DEXTRAN (VISCOBA) TO MICROBIAL DETERIORATION. WORLD PET. (OCTOBER):73-78.

(2448) ------. 1958. DEXTRAN AND ASIATIC GUMS. SURPLUS SUCROSE IN OIL WELL DRILLING. SUGAR 53(2):44-45.

(2449) RUIZ, A. R. 1957. RECENT PROGRESS IN BY-PRODUCTS DEVELOPMENT. (DEXTRAN PILOT PLANT IN MATANZAS PROVINCE, CUBA.) SUGAR J. 20:50-52.

SEE ALSO: 2401 PATENT SECTION XXXII B

D. Soil Science and Technology

(2450) CLAPP, C. E., A. E. OLNESS, AND D. J. HOFFMANN. 1968. ADSORPTION STUDIES OF A DEXTRAN ON MONTOMORILLONITE. (DEXTRAN NRRL B-512(F).) TRANS. INT. CONGR. SOIL SCI. 9TH, 1:627-634. ALSO IN CHEM. ABSTR. 1970. 72:59517P.

(2451) EMERSON, W. W. 1956. SYNTHETIC SOIL CONDITIONERS. J. AGRIC. SCI. 47:117-121.

(2452) ------. 1963. THE EFFECT OF POLYMERS ON THE SWELLING OF MONTMORILLONITE. J. SOIL SCI. 14:52-56.

(2453) GEOGHEGAN, M. J., AND R. C. BRIAN. 1948. INFLUENCE OF SOME BACTERIAL POLYSACCHARIDES ON THE BINDING OF SOIL PARTICLES. BIOCHEM. J. 43:5-13.

(2454) ------. 1950. AGGREGATE FORMATION IN SOIL. INFLUENCE OF SOME MICROBIAL METABOLIC PRODUCTS AND OTHER SUBSTANCES ON AGGREGATION OF SOIL PARTICLES. TRANS. INT. CONGR. SOIL SCI. 4TH, 4:103-104. ALSO IN CHEM. ABSTR. 1952. 46:2217A.

(2455) HAWORTH, W. N., F. W. PINKARD, AND M. STACEY. 1946. FUNCTION OF BACTERIAL POLYSACCHARIDES IN THE SOIL. NATURE (LONDON) 158:836-837.

(2456) MARTIN, J. P. 1946. MICROORGANISMS AND SOIL AGGREGATION. II. INFLUENCE OF BACTERIAL POLYSACCHARIDES ON SOIL STRUCTURE. SOIL SCI. 61:157-166.

(2457) ------ AND D. G. ALDRICH. 1955. INFLUENCE OF SOIL EXCHANGEABLE-CATIONS RATIOS ON THE AGGREGATING EFFECTS OF NATURAL AND SYNTHETIC SOIL CONDITIONERS. SOIL SCI. SOC. AM. PROC. 19:50-54. ALSO IN CHEM. ABSTR. 1955. 49:10556.

(2458) ------ AND S. J. RICHARDS. 1963. DECOMPOSITION AND BINDING ACTION OF A POLYSACCHARIDE FROM CHROMOBACTERIUM VIOLACEUM IN SOIL. J. BACTERIOL. 85:1288-1294.

(2459) ------, K. HAIDER, AND W. J. FARMER. 1974. DECOMPOSITION AND DISTRIBUTION OF RESIDUAL ACTIVITY OF SOME CARBON-14-LABELED MICROBIAL POLYSACCHARIDES AND CELLS, GLUCOSE, CELLULOSE, AND WHEAT STRAW IN SOIL. SOIL BIOL. BIOCHEM. 6:221-230. ALSO IN CHEM. ABSTR. 1974. 81:150977K.

(2460) NOVAK, L. J., E. E. WITT, AND M. J. HILER. 1955. DEXTRAN AND DEXTRAN PRODUCTS AS SOIL CONDITIONING MATERIALS. J. AGRIC. FOOD CHEM. 3:1028-1033.

(2461) OADES, J. M., AND G. H. WAGNER. 1971. BIOSYNTHESIS OF SUGARS IN SOILS INCUBATED WITH GLUCOSE-14C AND DEXTRAN-14C. SOIL SCI. SOC. AM. PROC. 35(6):914-917.

(2462) PAPAVIZAS, G. C., J. A. LEWIS, AND P. B. ADAMS. 1968. SURVIVAL OF ROOT-INFECTING FUNGI IN SOIL. II. INFLUENCE OF AMENDMENT AND SOIL CARBON-TO-NITROGEN BALANCE ON FUSARIUM ROOT ROT OF BEANS. PHYTOPATHOLOGY 58:365-372. ALSO IN CHEM. ABSTR. 1968. 68:104083Z.

(2463) SCHWARTZ, S. M., P. G. FREEMAN, AND C. R. RUSSELL. 1958. SOIL-CONDITIONING PROPERTIES OF MODIFIED AGRICULTURAL RESIDUES AND RELATED MATERIALS: II. PERSISTENCE OF SOIL-STABILIZING ACTIVITY AS A FUNCTION OF TYPE AND EXTENT OF MODIFICATION. SOIL SCI. SOC. AM. PROC. 22:409-414.

(2464) SMITH, H. E., S. M. SCHWARTZ, L. A. GUGLIEMELLI, AND OTHERS. 1958. SOIL-CONDITIONING PROPERTIES OF MODIFIED AGRICULTURAL RESIDUES AND RELATED MATERIALS: I. AGGREGATE STABILIZATION AS A FUNCTION OF TYPE AND EXTENT OF CHEMICAL MODIFICATION. SOIL SCI. SOC. AM. PROC. 22:405-409.

SEE ALSO: 882

E. Miscellaneous

(2465) HAMBURG, M. 1934. [DEXTRAN] (IN GERMAN). (PARTIAL REPLACEMENT OF MALT.) BRAU MALZIND. 34:15-16. ALSO IN CHEM. ABSTR. 28:7418.

(2466) JEANES, A. (WITH THE PROFESSIONAL ASSISTANCE OF B. NORRMAN). 1967. DEXTRAN BIBLIOGRAPHY PART A: PATENTS ON PRODUCTION AND USE OF NATIVE DEXTRANS, PARTIALLY DEGRADED DEXTRANS, AND THEIR DERIVATIVES. U.S. DEP. AGRIC. BULL ARS-71-36, 94 PP. (PROCESSED).

(2467) LA MER, V. K., R. H. SMELLIE, JR., AND P. K. LEE. 1957. FLOCCULATION, SUBSIDENCE, AND FILTRATION OF PHOSPHATE SLIMES. IV. FLOCCULATION BY GUMS, AND POLYELECTROLYTES AND THEIR INFLUENCE ON FILTRATION RATE. J. COLLOID SCI. 12:230-239.

(2468) LUX, A., E. LASZLO, J. HUSZAR, AND OTHERS. 1967. [IMPORTANCE AND DEGRADATION OF STARCH IN THE BAYER PROCESS. PART 5. REPLACEMENT OF STARCH BY OTHER POLYSACCHARIDE] (IN GERMAN, ENGLISH SUMMARY). STAERKE 19:130-134.

(2469) RUSSELL, C. R., R. A. BUCHANAN, C. E. RIST, AND OTHERS. 1962. CEREAL PULPS. I. PREPARATION AND APPLICATION OF CROSSLINKED CEREAL XANTHATES IN PAPER PRODUCTS. TAPPI 45:557-566.

(2470) SWANSON, J. W. 1950. THE EFFECTS OF NATURAL BEATER ADDITIVES ON PAPERMAKING FIBERS. TAPPI 33(9):451-462.

(2471) WAELE, A. D. 1945. THE USE OF DEFLOCCULATORS IN DUPLICATING STENCIL TISSUE MANUFACTURE. CHEM. IND. (LONDON) (32):253.

SEE ALSO: 988 PATENT SECTION XXXV

XXV. Books and general reviews

(2472) APPEL, W., AND E. BIEKERT. 1968. REPLACEMENT OF PLASMA BY HIGH MOLECULAR WEIGHT SUBSTANCES. (INCLUDES HISTORICAL DEVELOPMENT OF PLASMA SUBSTITUTES.) ANGEW. CHEM. INT. ED. ENGL. 7(9):702-706.

(2473) BAKER, P. J., JR. 1959. DEXTRANS. IN R. L. WHISTLER AND J. N. DEMILLER, EDS. INDUSTRIAL GUMS--POLYSACCHARIDES AND THEIR DERIVATIVES, PP. 531-563. ACADEMIC PRESS, NEW YORK.

(2474) BEHRENS, U., AND M. RINGPFEIL. 1964. [MICROBIAL POLYSACCHARIDES] (IN GERMAN). AKADEMIE-VERLAG, BERLIN. 157 PP.

(2475) DIMLER, R. J. 1968. DEXTRAN SAVES LIVES. (ILLUSTRATED.) U.S. DEP. AGRIC. YEARBOOK, PP. 314-317.

(2476) EVANS, T. H., AND H. HIBBERT. 1946. BACTERIAL POLYSACCHARIDES. ADV. CARBOHYDR. CHEM. 2:203-233. ALSO IN SUGAR RES. FOUND. SCI. REP. SER. 6.

(2477) GOERLICH, E. 1969. [DEXTRAN AND DEXTRAN DERIVATIVES] (IN GERMAN). (A REVIEW WITH 19 FIGURES AND TABLES; AND 33 REFERENCES.) ARCH. PHARM. 302(7). ALSO IN CHEM. ABSTR. 1969. 71:126274B AND MITT. DTSCH. PHARM. GES. DDR 39(7):149-167.

(2478) HARADA, T. 1969. [PRODUCTION OF POLYSACCHARIDES BY MICROORGANISMS AND ITS UTILIZATION] (IN JAPANESE). KOGYO KAGAKU ZASSHI 72(2):456-460. ALSO IN CHEM. ABSTR. 1969. 71:11707C.

(2479) INGELMAN, B., A. GROENWALL, L. E. GELIN, AND R. ELIASSON. 1969. PROPERTIES AND APPLICATIONS OF DEXTRANS. ACTA ACAD. REGIAE SCI. UPS. 12:1-90.

(2480) JEANES, A. 1966. DEXTRAN. ENCYCL. POLYM. SCI. TECHNOL. 4:805-824.

(2481) LORENZO-LUACES, E. 1954. [THE SUCROCHEMICAL INDUSTRY: NEW SOURCE OF WEALTH. I. DEXTRAN AND ITS DERIVATIVES] (IN SPANISH). (A REVIEW WITH 100 REFERENCES.) [ASSOCIATION SUGAR TECHNOLOGISTS OF CUBA, 28TH CONFERENCE REPORTS]. ABSTRACTED IN INT. SUGAR J. 1956. 58(695):317.

(2482) MCNEELY, W. H. 1967. BIOSYNTHETIC POLYSACCHARIDES. IN H. J. PEPPLER, ED. MICROBIAL TECHNOLOGY, PP. 381-402. (DEXTRAN PP. 385-388.) REINHOLD PUBLISHING CORP., NEW YORK.

(2483) MISAKI, A. 1968. [MICROBIAL POLYSACCHARIDES] (IN JAPANESE). (A REVIEW WITH 100 REFERENCES.) KOBUNSHI 17(196):569-580. ALSO IN CHEM. ABSTR. 69:93797C.

(2484) MURPHY, P. T., AND R. L. WHISTLER. 1973. DEXTRANS. IN R. L. WHISTLER AND J. N. BEMILLER, EDS. INDUSTRIAL GUMS: POLYSACCHARIDES AND THEIR DERIVATIVES 2ND ED., PP. 513-542. ACADEMIC PRESS, NEW YORK AND LONDON.

(2485) NEELY, W. B. 1960. DEXTRAN: STRUCTURE AND SYNTHESIS. ADV. CARBOHYDR. CHEM. 15:341-369.

(2486) OWEN, W. L. 1945. FERMENTATION AND MICROORGANISMS IN SUGAR MANUFACTURE AND REFINING. IN G. L. SPENCER AND G. P. MEADE, EDS. CANE SUGAR HANDBOOK--A MANUAL FOR CANE SUGAR MANUFACTURES AND THEIR CHEMISTS, 8TH ED., REVISED, PP. 653-662. JOHN WILEY AND SONS, INC., NEW YORK.

(2487) ------. 1949. THE MICROBIOLOGY OF SUGARS, SYRUPS, AND MOLASSES. BARR-OWEN RESEARCH ENTERPRISES, NEW ORLEANS. 275 PP.

(2488) PRESCOTT, S. C., AND C. G. DUNN. 1959. DEXTRANS. IN S. C. PRESCOTT AND C. G. DUNN, INDUSTRIAL MICROBIOLOGY, 3RD ED., REVISED, PP. 370-392. MCGRAW-HILL BOOK CO., INC. NEW YORK.

(2489) REHM, H-J. V. 1967. [POLYSACCHARIDES] (IN GERMAN). IN HANS-JUERGEN VON REHM, INDUSTRIELLE MIKROBIOLOGIE, PP. 104-114. SPRINGER-VERLAG, BERLIN; HEIDELBERG; AND NEW YORK.

(2490) ROEDERER, H. V. 1950. [CARBOHYDRATES PRODUCED BY BACTERIA] (IN GERMAN, ENGLISH SUMMARY). STAERKE 2:267-271.

(2491) SHIGA, T. 1954. [DEXTRAN] (IN JAPANESE). (A REVIEW WITH 209 REFERENCES.) FERMENT. ASSOC. JPN. 12:129-152.

(2492) SQUIRE, J. R., J. P. BULL, W. D'A. MAYCOCK, AND C. R. RICKETTS. 1955. DEXTRAN: ITS PROPERTIES AND USE IN MEDICINE. CHARLES C. THOMAS, SPRINGFIELD, ILL. 91 PP.

(2493) STACEY, M., AND C. R. RICKETTS. 1951. BACTERIAL DEXTRANS. PROG. CHEM. ORG. NAT. PROD. 8:28-46.

(2494) STOLOFF, L. 1958. POLYSACCHARIDE HYDROCOLLOIDS OF COMMERCE. ADV. CARBOHYDR. CHEM. 13:265-287.

(2495) VIRNIK, A. D., K. P. KHOMYAKOV, AND I. F. SKOKOVA. 1975. [DEXTRAN AND ITS DERIVATIVES] (IN RUSSIAN). (A REVIEW WITH 335 REFERENCES.) USP. KHIM. 44(7):1280-1307. ALSO IN CHEM. ABSTR. 1975. 83:193594S.

(2496) WALTON, K. W. 1953. DEXTRAN AND ITS DERIVATIVES. MFG. CHEM. 24:330-333.

(2497) WILLENBERG, W. 1953. [DEXTRAN, A PROCESSED PRODUCT OF SUGAR] (IN GERMAN). (A REVIEW.) ZUCKER 6:33-36. ALSO IN CHEM. ABSTR. 1953. 47:4637.

(2498) WIRNER, H. 1958. [CLINICAL DEXTRAN] (IN GERMAN). Z. ZUCKERIND. 83:442-445.

SEE ALSO: 277 THROUGH 282 549 1133 2003 2106 2113 2121 2122 2136 2466 2508

XXVI. Addenda

Classification section is indicated after citation.

(2499) BANKERT, R. B., G. L. MAYERS, AND D. PRESSMAN. 1977. MECHANISMS OF B CELL TOLERANCE I. TOLERANCE TO DEXTRAN B-1355 INDUCED WITH THE OXIDIZED DEXTRAN. J. IMMUNOL. IN PRESS. (XIX A.)

(2500) BURGER, R., U. HADDING, H. U. SCHORLEMMER, AND OTHERS. 1975. DEXTRAN SULFATE: A SYNTHETIC ACTIVATOR OF C3 VIA THE ALTERNATE PATHWAY. IMMUNOLOGY 29:549-554. (XV E.)

(2501) COLE, J. S., III, G. E. CLARK, AND R. WISTAR, JR. 1976. INFLUENCE OF SECRETORY IMMUNOGLOBULIN A AND PURIFIED SECRETORY COMPONENT ON DEXTRAN-SUCRASE ACTIVITY OF STREPTOCOCCUS MUTANS. J. BACTERIOL. 127:1595-1596. (XXIII C.)

(2502) CORRIGAN, A. J., AND J. F. ROBYT. 1977. ACTIVATION OF DEXTRANSUCRASE FROM STREPTOCOCCUS MUTANS OMZ 176 BY DEXTRAN AND MODIFIED DEXTRAN AND THE NONEXISTENCE OF THE PRIMER REQUIREMENT FOR THE SYNTHESIS OF DEXTRAN [ABSTRACT 2746]. FED. PROC. 36(3). (III C.)

(2503) COUTINHO, A., AND G. MOELLER. 1973. B CELL MITOGENIC PROPERTIES OF THYMUS-INDEPENDENT ANTIGENS. NATURE (LONDON) NEW BIOL. 245:12-14. (XVII C.)

(2504) DEA, I. C. M., E. R. MORRIS, D. A. REES, AND OTHERS. 1977. ASSOCIATIONS OF LIKE AND UNLIKE POLYSACCHARIDES: MECHANISM AND SPECIFICITY IN GALACTOMANNANS, INTERACTING BACTERIAL POLYSACCHARIDES, AND RELATED SYSTEMS. CARBOHYDR. RES. IN PRESS. (X C.)

(2505) DORNER, M. M., W. J. YOUNT, AND E. A. KABAT. 1969. STUDIES ON HUMAN ANTIBODIES. VII. ACRYLAMIDE GEL ELECTROPHORESIS OF PURIFIED HUMAN ANTIBODIES AND MYELOMA PROTEINS, THEIR HEAVY AND LIGHT CHAINS. J. IMMUNOL. 102:273-282. (XIX D.)

(2506) GAGNAIRE, D. Y., F. R. TARAVEL, AND M. R. VIGNON. 1976. [ASSIGNMENT OF 13-C NUCLEAR MAGNETIC RESONANCE SIGNALS OF PERACETYLATED DISACCHARIDES IN THE D-GLUCOSE SERIES] (IN FRENCH). CARBOHYDR. RES. 51:157-168. (VIII F.)

(2507) GOLDSTEIN-LIFSCHITZ, B., AND S. BAUER. 1976. COMPARISON OF DEXTRANASES FOR THEIR POSSIBLE USE IN ELIMINATING DENTAL PLAQUE. J. DENT. RES. 55:886-892. (XXIII D.)

(2508) JEANES, A. 1977. DEXTRANS AND PULLULANS: INDUSTRIALLY SIGNIFICANT ALPHA-D-GLUCANS. ACS SYMPOSIUM SERIES 45:284-298. (XXV.)

(2509) KOBAYASHI, M., AND K. MATSUDA. 1976. PURIFICATION AND PROPERTIES OF THE EXTRACELLULAR DEXTRANSUCRASE FROM LEUCONOSTOC MESENTEROIDES NRRL B-1299. J. BIOCHEM. 79:1301-1308. (III C.)

(2510) PASIKA, W. M., AND A. WEST. 1972. SPHERULITES PRODUCED NONBIOLOGICALLY. CHEM. ENG. NEWS 50(20):13-14. (XI A.)

(2511) PULKOWNIK, A., AND G. J. WALKER. 1977. PURIFICATION AND SUBSTRATE SPECIFICITY OF AN ENDO-DEXTRANASE OF STREPTOCOCCUS MUTANS KI-R. CARBOHYDR. RES. IN PRESS. (XXIII D.)

(2512) ROELLA, G., AND P. MATHIESEN. 1970. THE ADSORPTION OF SALIVARY PROTEINS AND DEXTRAN TO HYDROXYLAPATITE. IN W. D. MCHUGH, ED. DENTAL PLAQUE, P. 129. D. C. THOMSON AND CO., LTD. DUNDEE. (XXIII F.)

(2513) TILBURY, R. H. 1975. OCCURRENCE AND EFFECTS OF LACTIC ACID BACTERIA IN THE SUGAR INDUSTRY. IN J. G. CARR, C. V. CUTTING, AND G. C. WHITING, EDS., LACTIC ACID BACTERIA IN BEVERAGES AND FOOD, PP. 177-191. ACADEMIC PRESS, LONDON, NEW YORK, SAN FRANCISCO. (XXIV A.)

(2514) TORII, M., K. SAKAKIBARA, B. P. ALBERTO, AND A. MISAKI. 1976. IMMUNOCHEMICAL STUDIES ON DEXTRANS: MICROHETEROGENEITY OF DEXTRAN NRRL B-1397 DEMONSTRATED BY PRECIPITATION WITH CONCANAVALIN A. BIOCHEM. BIOPHYS. RES. COMMUN. 72:236-242. (VII B.)

(2515) WALKER, G. J. 1972. SOME PROPERTIES OF A DEXTRANGLUCOSIDASE ISOLATED FROM STREPTOCOCCI AND ITS USE IN STUDIES ON DEXTRAN SYNTHESIS. J. DENT. RES. SUPPL. 51(2):(PART 2):409-414. (XXIII D.)

(2516) ------. 1977. SYNTHESIS OF OLIGOSACCHARIDES OF THE ISOMALTOSE SERIES LABELLED WITH C-14 AT THE REDUCING END. CARBOHYDR. RES. 53:263-267. (VIII I.)

(2517) ------ AND M. D. HARE. 1977. METABOLISM OF THE POLYSACCHARIDES OF HUMAN DENTAL PLAQUE. PART 2. PURIFICATION AND PROPERTIES OF CLADOSPORIUM RESINAE 1,3-ALPHA-D-GLUCANASE, AND THE ENZYMIC HYDROLYSIS OF GLUCANS SYNTHESIZED BY EXTRACELLULAR GLUCOSYL TRANSFERASES OF ORAL STREPTOCOCCI. CARBOHYDR. RES. IN PRESS. (XXIII D.)

Index of Authors of Research Literature

AASETH, J. 1128 1274 1275 1281
ABBOTT, D. 529 530 531 586
ABDEL-AKHER, M. 116 503
ABDULLAH, M. 712
ABERG, B. 1049 1050 1608 1952 1966 1969 1975 1992 1994 1997 2190
ABRAHAMS, I. 1733
ACKERS, G. K. 1288
ADAMKIEWICZ, L. M. 1888 1889
ADAMKIEWICZ, V. W. 1887 1888 1889 1890 1891 1892
ADAMS, E. T., JR. 482
ADAMS, P. B. 2462
ADAMYANTS, K. S. 1342
ADELSON, E. 1594 1607
ADRIANO, F. T. 2421
ADROUNY, G. A. 2031
AGRAWAL, B. B. L. 1614 1615 1616 1617 1618 1619 1620
AHLBORG, K. 613
AHLERS, H. 2409
AHRGREN, L. 950 1449
AISENBERG, A. C. 1766
AKERSTROEM, S. 1449 1452 1457 1458
ALAUPOVIC, P. 1360
ALBERTO, B. P. 2514
ALBERTS, B. M. 1058 1059
ALBERTSSON, P. A. 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1078 1082 1083 1084 1089
ALBURY, M. N. 84
ALDRICH, D. G. 2457
ALEVY, Y. G. 1562
ALEXANDER, B. H. 525 584
ALFORD, J. A. 1
ALI, H. 47
ALLANSON, V. 75
ALLEN, P. Z. 1648 1742 1743 1744 1745 1746 1747
ALLERHAND, A. 898
ALLGEN, L. G. 797 1327
ALTGELT, K. H. 1289
ALY, F. W. 1103
AMANO, K. 103
AMMON, R. 1998
AMSELEM, A. 1349
AMSPACHER, W. H. 2115 2191
ANDERSON, C. M. 2032
ANDERSON, R. 1893
ANDERSON, W. 1387
ANDO, T. 721
ANDRLIK, K. 764
ANGUS, H. J. F. 681
ANNAU, E. 1854
ANONYMOUS. 382 383 384 385 386 387 1240 1241 1242 1243 1244 1864 1953 1954 2192 2193 2422 2423
ANTONINI, E. 779 780 1106 1107 1108 1389
APOSTOLIDES, CH. 498
APPEL, W. 899 1009 1010 2184 2472
APPELLA, E. 1799 1800
APPLING, J. W. 2374
ARAKATSU, Y. 1748
ARCHER, G. T. 1894

ARCINIEGA, L. 89
ARGUELLES, A. L. 7
ARMSTRONG, K. J. 1450
ARNETT, A. T. 532
ARNOLD, B. H. 2 3
AROND, L. H. 798
ARONSSON, T. 1036
ARRHENIUS, A. 4 5
ARTURSON, G. 435 2145
ARTZ, C. P. 2159 2194 2195
ASANO, T. 133
ASCHER, G. S. 1085 1091 1093
ASCHNER, M. 157
ASHWELL, G. 1451 1748 1790
ASHWOOD-SMITH, M. J. 1563
ASHWORTH, C. T. 2160
ASO, K. 236 255 614 616 627 640 641
642 713 725 735 738 745 755
756 758 761 762 763
ASOFSKY, R. M. 1827
ASPINALL, P. T. 1290
ASTON, P. 2196
ATIK, M. 2197
ATKINS, E. D. T. 799
AURICCHIO, F. 1999
AURICCHIO, S. 2033 2034 2035 2036 2037 2038 2056
2085 2086 2088 2089
AUZZI, G. 1158
AVIGAD, G. 182
AVINERI-SHAPIRO, S. 157 224 226
AXEN, R. 1474 1475 1476 1477 1478
AYRES, P. M. 2271

BAASTAD, K. L. 312
BABCOCK, G. E. 909
BACHMANN, L. 862
BADDILEY, J. 760
BAECHI, TH. 2073
BAENS-ARCEGA, L. 6 7
BAHN, A. N. 2365 2366 2373
BAILEY, R. W. 8 117 118 119 139 176 177
178 237 238 239 240 241 341
342 343 344 533 587 643 669
BAILLIE, A. J. 1387
BAIRD, G. D. 1073
BAIRD, J. K. 534 2325
BAK, A. F. 958
BAKER, H. J. 1946
BAKER, P. J., JR. 1376 2473
BAKER, R. W. 487
BAKER, S. B. D. 1278
BALDWIN, R. L. 436
BALLANTYNE, B. 1245
BALLOU, C. E. 609 635 675
BALLUS, R. C. 394
BAN, T. A. 1929
BANERJEE, R. P. 1496
BANGHART, S. B. 2251 2266 2350
BANKERT, R. B. 1826 2499
BARANOWSKA, J. 1057
BARHAM, P. J. 799

BARKER, S. A. 117 176 177 179 199 237 238 239 240 242 345 488 489 535 536 537 538 551 594 625 644 645 670 730 731 746 781 800 801 833 1109 1621
BARNES, I. J. 9
BARNETT, R. O. 67
BARNHART, M. I. 2220
BARRALES-RIENDA, J. M. 437
BARRATT, T. M. 2039
BARSTAD, P. 1801 1802
BARZOTTI, A. M. 10
BASEDOW, A. M. 438 951
BASSETT, E. W. 1749 1752
BASSIN, R. H. 1204
BATCHELOR, A. 1254
BATES, C. M. 1260
BATHGATE, G. N. 490
BATTISTO, J. R. 1562 1666 1668
BAUER, S. 2507
BAYER, M. E. 1399
BEASLEY, J. D., III 924
BEAU, R. 496
BECHAMP, A. 11
BECK, W. S. 1609
BECKER, C. H. 903
BECKMANN, C. D. 1199
BEELEY, J. A. 2271
BEHRENS, U. 144 175 388 409 2474
BEIJERINCK, M. W. 12
BEISER, S. M. 1752
BEKE, G. 439 900 901
BELCHER, H. V. 2186
BELLAMY, J. 1565
BELLAMY, W. D. 866
BELLELLI, L. 779 780 1106 1107 1108
BELVAL, H. 23 766 767 783 2375
BEN, M. 1943
BENAS, A. 1527
BENDER, H. 360
BENEDICT, R. G. 283 420
BENGTSSON, S. 1074 1413 1414 1415
BENJAMIN, N. R. 1575
BENJAMIN, S. A. 1564
BENNETT, I. L., JR. 1865
BENNETT, W. A. 2223
BENSON, J. W. 2147
BENTIVOGLIO, A. P. 1926
BERALDO, W. T. 1895
BERG, D. 1686 1769 1770
BERG, H. 389 440 441 448 471 486 802
BERGER, P. D. 646
BERKELEY, B. J. 1345 1388
BERMAN, K. 2250
BERMES, E. W., JR. 803
BERNFELD, P. 1345 1346 1388 1425
BERNIER, B. 284
BERNSTEIN, E. F. 1571
BERRY, J. M. 698
BERTCHER, R. 1565
BERTONIERE, N. R. 647
BETHENCOURT, G. F. 2424
BEVENUE, A. 666

BEYCHOK, S. 580 671
BEYER, W. 389
BEZER, A. E. 1756 1779
BHOOPALAM, N. 1803
BIDINOST, L. E. 1038
BIEBER, R. E. 1388
BIEKERT, E. 2472
BIENENGRAEBER, A. 1955
BIENVENU, R. 13
BILGUTAY, A. 2236
BINZ, H. 2073
BIRBECK, M. S. C. 1094
BIRGITTE, B. 662
BISHOP, C. T. 1184
BISHOP, S. H. 575
BITTIGER, H. 1185
BIXLER, G. H. 390
BLACKWELL, J. 891
BLECHERT, A. 53
BLEIWEIS, A. S. 2371
BLITSTEIN-WILLINGER, E. 1422
BLOCK, P. L. 2297
BLOMBERG, B. 1804 1805 1809 1832
BLOOM, W. L. 427 1011 1566 1934 1952 1956 1959
2000 2031 2099 2100 2151 2198 2199
2221
BLUM, L. 1837 1850 1851
BOATH, N. H. 1268
BOCHERT, G. 1420 1421
BODIN, N. S. 989
BOEHME, H. J. 1110
BOHMANSSON, G. 2200
BOIS, P. 1924 1925
BOLLMAN, J. L. 1957 2101 2155
BOLOTNIKOVA, F. I. 14 120
BOLTE, A. 1016
BOMBARDIERI, G. 1111 1117
BOMBAUGH, K. J. 491 492
BONACCI, M. L. 780
BONACCORSI, A. 1896
BONIN, A. 1979
BONNEL, P. H. 1949
BONNER, F. J. 952
BONTOUX, J. 804
BOONE, O. R. 2186
BOOTH, A. N. 2001
BOOTH, G. C. 902
BORGEAU, G. 2342
BORODKIN, S. E. 646
BORTZ, J. 1022
BORUCH, M. 648 805
BOSTELMANN, W. 1119
BOUILLENNE, R. 15
BOUISSOU, H. 1246
BOULANGER, P. 1854
BOUMA, C. 58
BOURNE, E. J. 117 176 177 178 179 199 237
238 239 240 241 242 243 244
245 246 346 347 531 536 537
538 539 540 588 589 594 644
649 650 670 682 730 731 746
800 801 1484
BOURRILLON, R. 1012 1958

BOVEY, F. A. 200 201 202
BOWEN, W. H. 345 577 1621 2259 2260 2261 2262
2298 2299 2300
BOWMAN, H. W. 2102
BOYAZHIEVA, A. 1230
BOYCE, C. R. 1829
BOYD, A. M. 2201
BOZZOLA, J. J. 2338
BRAHMANKAR, D. M. 2176
BRASWELL, E. 203 204
BRAUNS, F. E. 541 548
BREDERECK, H. 699
BREMERSKOV, V. 1416
BREMNER, I. 1231
BREWER, D. B. 2146
BREWER, J. 1291
BREWER, S. S. 2199
BRIAN, R. C. 2453
BRICKER, H. M. 306
BRILES, D. E. 1814 1815
BRILL, M. L. 2092
BRIOT, M. 1897 1898 1917 1918 1919 1920
BRITTINGHAM, T. E. 1572
BROKAW, C. H. 71
BRONSON, P. M. 964 965 1754
BROOKS, D. E. 953 954 955 956 1092
BROSCHE, M. 210 445
BROSSARD, L. C. 542
BROSTROEM, K. 1452
BROWN, P. E. 760
BROWN, R. G. 16 313 314
BROWNE, C. A., JR. 17
BROWNSTEIN, A. M. 638
BRUCE, C. 957
BRUCE, G. T. 536 538
BRUCKNER, B. H. 509
BRUCKNER, D. 388
BRUIJN, J. 2376 2377
BRUNER, H. D. 1960
BRUNI, C. B. 1999
BRUNNER, G. 434
BRUNSON, J. 1383
BRUZZESI, M. R. 391 779 1106 1107 1108 1117 1389
1555
BRYAN, G. C. 1701
BRYANT, M. F. 2199
BRYCE, W. A. J. 1545 1578
BRZOZOWSKA, M. 765
BUCHANAN, R. A. 2469
BUCKLAND, I. K. 548
BUCKLEY, E. S., JR. 1566 1567
BUDOVICH, T. 739 740
BUGNOWSKI, H. 1247
BUILDER, J. E. 378
BUKURESHTLIEV, A. 1248
BULL, A. 1013
BULL, J. P. 2103 2492
BURAND, P. 2040
BURCHARD, W. 806
BURCKHARDT, J. J. 318 2311
BURGER, M. 1593
BURGER, R. 2500
BURGTORF, E. 861

BURKE, W. E. 2202
BURKET, S. C. 807
BURNETT, L. 1599
BURSON, N. 1959
BURSTEIN, M. 1347
BUTLER, K. 1717
BUXTON, R. W. 2179

CADWALLADER, D. E. 903 2185
CALCINARI, R. 1328
CALDWELL, M. L. 361 365
CALDWELL, R. C. 2301
CAMERON, J. M. 2386
CAMPBELL, D. H. 1858
CAMPBELL, H. 904
CAMPBELL, J. B. 1417
CANAL, J. 1348
CANIZARO, P. C. 2235
CARBONE, J. V. 1497 1569 2104
CARDINALE, M. 1869
CARGILL, W. H. 1960 2151
CARLETON, L. T. 1075
CARLQVIST, B. 782
CARLSON, W. W. 18 19 20 110 111 113 114 140 309
CARLSSON, J. 2244 2245 2263 2272 2287 2362
CARPENTER, D. O. 958
CARR, C. 392
CARRUTHERS, A. 21
CARSON, D. 1805 1806 1835
CARTER, J. 205
CARVER, B. R. 1139
CASALS, J. B. 1276
CASSELL, M. 1570 1572
CASSINGENA, R. 1210
CASTAIGNE, A. 1349
CASTANEDA, A. R. 1571
CASTELLANI, A. G. 75
CASU, B. 808 809
CERBON, J. 959
CERLETTI, P. 822 823
CERNY, L. C. 960
CERNY, M. 543
CESARI, I. M. 1807 1834
CESKA, M. 348 349 544 1498 1499 1500 1501 1502
CHAIET, L. 315
CHANEY, A. 1182
CHANG, H. L. 2203
CHANG, P. K. 1177
CHAPLIN, H., JR. 1570 1572
CHARLES, A. F. 285 393
CHASSY, B. M. 2256 2326
CHATTERJI, A. 1285 1286
CHEETHAM, N. W. H. 316 317 442
CHEN, J. C. 1667
CHEN, J. S. 2203
CHERKESOVA, G. V. 308
CHERNOV, G. A. 1112
CHERNYAK, V. Y. 418 443 905 906
CHIANCONE, E. 810 1389

CHIANG, C. H. 2203
CHIAPPETTA, G. 1666 1668
CHIBA, S. 651 727
CHIBATA, I. 1479 1483
CHIEN, S. 972
CHILDERS, C. W. 993
CHILDERS, R. F. 898
CHISTYAKOV, S. S. 2243
CHLUDZINSKI, A. M. 2273 2277 2278
CHOATE, W. H. 2204
CHRISTENSEN, T. B. 1453 1471 1472
CHRISTIE, T. M. 2332
CHURMS, S. C. 961
CHYTIL, F. 1961
CIARDI, J. E. 2274
CIFERRI, A. 811 962 980 981 982
CIFONELLI, J. A. 750 1622 1623 1624 1718 1719
CISAR, J. 1750 1751 1808
CLANCY, M. J. 626
CLAPP, C. E. 2450
CLARK, B. 1095
CLARK, F. 1273
CLARK, G. E. 2501
CLARKE, J. K. 2246
CLARKE, R. T. J. 286 341
CLAY, B. 465
CLAYTON, D. 1014
CLONINGER, C. K. 2378
CLUSKEY, J. E. 250 884
COCKRELL, E. W. 2116
COGAN, U. 1350 1361
COGNET, J. 1703
COGOLI, A. 2041 2042 2043
COHEN, H. 1899
COHN, M. 1809 1813 1834 1835
COLE, J. S., III 2501
COLIN, H. 22 23 766 767 783
COLLIN, C. 1078
COLMER, A. R. 65 66
COLSON, P. 812
COLTER, J. S. 1417
CONKLIN, K. A. 2044
CONNOR, W. E. 2176
CONRAD, H. R. 1256
CONWAY, H. F. 169 424
COOPER, E. A. 21
COPELAND, W. H. 364
CORI, C. F. 794 1494
CORLEY, R. D. 1573
CORMAN, J. 172 377
CORMIER, A. D. 1024
CORNWELL, D. G. 1351 1362
CORRIGAN, A. J. 2502
COTTET, J. 2180
COULSON, E. J. 1669 1670
COULTER, S. T. 2430 2431
COURTENAY, B. M. 1682 1683 1684 1685
COUTINHO, A. 1574 2503
COUTINHO, H. 2209
COVACEVICH, M. T. 545
COX, J. S. G. 1231 1232 1238
CRAGG, L. H. 569 570 571 857 858 890 1159
1160 1336

CRAINIC, R. 1432
CRANE, R. D. 1971
CRANE, R. K. 2045
CREAMER, H. R. 2357
CREECH, O., JR. 987
CRETCHER, L. H. 793
CRIFO, C. 1111
CRITCHLEY, P. 2264 2333 2361
CROCKER, M. C. 2205
CRONHOLM, L. 1627
CRONK, J. N. 2206 2207
CROSBY, W. H. 912 1569 1575 1594 2107
CROSS, W. E. 2379
CROWLE, A. J. 1900
CROWLEY, N. 287
CRUTCHFIELD, T. 1075
CSIZMAS, L. 1875
CUCCI, M. W. 24
CUMMINS, D. L. 2046
CUNDIFF, R. L. 469
CURRERI, A. R. 2191
CURRY, G. J. 2208
CURTIUS, C. H. 2090
CUTRIGHT, D. E. 924
CYBULSKA, J. 141 142 143
CYR, M. J. ST. 562 563 564

D'HONT, M. D. 1566
DAEMS, W. T. 1485 1962
DAEUMICHEN, P. 768
DAHLQVIST, A. 2034 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2083 2247
DAIN, J. A. 25
DAKER, W. D. 769 770
DALTER, R. S. 421
DAMAS, J. 922
DANILOVA, N. A. 1656
DARGAN, E. L. 2105 2130
DARK, W. A. 491 492
DASMOHAPATRA, B. 288
DASZYNSKI, J. 1576
DAUPLAN, A. 804
DAVID, H. 1257
DAVIDSON, E. A. 2072
DAVIDSON, J. K. 1220
DAVIE, J. M. 1814 1815
DAVIES, A. M. 1866 1873
DAVIES, J. V. 1332
DAVIS, C. W. 2380 2388 2389
DAVIS, H. A. 998 1008
DAVIS, J. C. 1292
DAVIS, J. H. 2147
DAVIS, J. L. 1418
DAWOUD, A. F. 1154 1186
DAY, C. E. 1352
DAY, H. G. 1493
DE BIE, M. J. A. 672 674
DE BOER, P. A. J. 963
DE BOER, W. 963

DE EDS, F.	2001						
DE HERTOGH, R.	1096						
DE LEON, H. A.	2326						
DE MAN, J. C. H.	1485						
DE MOOR, C. E.	2248						
DE MORAIS, O. J.	2209						
DE PREVAL, C.	1809						
DE STOPPELAR, J. D.	2248						
DE VRIES, A. J.	496						
DEA, I. C. M.	2504						
DEACONU-PELEA, M.	289						
DEBELDER, A. N.	917	950	1113	1114	1115	1116	
DEDEK, J.	2381						
DEDONDER, R. A.	206						
DEIBEL, R. H.	26						
DELAGE, J. C.	2382						
DELATTRE, J.	1348						
DEMARCO, C.	1111	1117					
DENT, E. DU B.	1015						
DERRICK, J. R.	2106						
DESAYMARD, C.	1671	1673	1682				
DETAK, J.	907						
DETERMANN, H.	1293						
DEWAELE, A.	813	814					
DEWAR, M. D.	381	2302	2303				
DEWECK, A. L.	1698						
DEZELIC, G.	484	485	947				
DEZELIC, N.	485	947					
DHALL, D. P.	1545	1577	1578				
DHILLON, A. S.	2294						
DIAMANTSTEIN, T.	1419	1420	1421	1422	1441	1963	
DIAS DA SILVA, W.	1895	1901					
DICK, W. E., JR.	747						
DICKMAN, S. R.	1390						
DIECKHOFF, J.	2210						
DIERICH, M.	1839						
DILOV, P.	1230	1248					
DIMLER, R. J.	250	504	505	555	597	629	660
	873	894	998	1008	1559	2475	
DINTZIS, F. R.	493	908	909				
DISALVO, J.	1503						
DISNEY, H. M.	1109						
DITZEL, J.	2177						
DOANE, W. M.	1118	1174					
DODD, M. C.	1079						
DODGSON, K. S.	1332						
DOKOWICZ-LUKASIAK, B.	1576						
DONAHUE, J. J.	2265						
DONKERSLOOT, J. A.	2326						
DONNELLY, E. H.	1625						
DOOLEY, C. L.	2297						
DORNER, M. M.	1750	1752	1753	1798	2505		
DORSEY, W. G.	1433						
DOYLE, J. T.	2242						
DOYLE, R. J.	1411	1412	1504	1561	1626	1627	1628
DRAGEN-BULARDA, M.	289						
DRATOHVIL, J.	484	485					
DRUCKER, D. B.	27						
DRYDEN, M. R.	460	938					
DUANE, M.	962						
DUBOIS, M.	999						
DUBS, R.	2067	2068					
DUDMAN, W. F.	1201	1505					

DUIJN, P. V. 1486 1495
DUKE, J. L. 748 749 750 1719
DUNHILL, P. 1473
DUNICAN, L. K. 28 145
DUNLOP, G. R. 2211
DUNN, C. G. 2488
DUNN, F. 974 975 976
DUNNILL, P. 1467
DUNSTONE, J. R. 966
DURDEN, W. F. 2118
DURROUX, R. 1246
DUTTON, G. G. S. 698
DUTTON, J. V. 2396
DVOLAITSKAYA-BARYSHOVA, K. M. 121
DVORAKOVA, J. 407 408
DVORNIK, D. 1353
DWORSCHACK, R. G. 146
DWYER, D. M. 350
DYERBERG, J. 2177
DZIZENKO, A. K. 519 989

EBENEZER, ST. 1010
EBERLE, A. 2042
EBERT, K. H. 180 181 207 208 209 210 211
212 277 438 444 445 446 447
815 816 910 911 951 1964 1965
EBERT, R. V. 2221
EBISU, S. 546 2304
EBNER, H. 1055
EBY, R. 700
EDBERG, S. C. 964 965 1754
EDDY, C. R. 679
EDGELL, M. H. 1087
EDLUND, T. 1902
EDMOND, E. 966 1506
EDO, H. 707
EDSTROM, R. D. 1444
EDWARDS, J. R. 561 566 2291
EFRATI, E. 1879
EGAMI, F. 1323
EGAN, B. T. 2383 2384
EGGERMONT, E. 2069 2070
EHRHART, H. 1963
EICHELBERGER, J. W., JR. 1581
EICHHOLZ, A. 2071
EIRICH, F. R. 877 1141 1142 1166
EISENBERG, F., JR. 213
EKKA, E. 1096
EKMAN, S. 1452
EL KHADEM, H. 683
EL'PINER, I. E. 949
EL-NAWAWY, A. S. 116
ELDJARN, L. 1128 1277 1281
ELGERT, K. F. 445
ELIAS, H. G. 817 818 819
ELIASSON, R. 1579 2479
ELKES, J. 2212
ELLIS, H. A. 1445
ELLIS, J. J. 43
ELLIS, J. R. 920
ELLWOOD, D. C. 534 2325

EMERSON, W. W. 2451 2452
EMNEUS, N. I. A. 1294
ENDOW, J. S. 1175
ENGELMANN, C. 1119
ENGSTRAND, L. 1966
ENNOR, K. S. 1182
ENYART, J. L. 2213
ERLANDER, S. R. 1526 1629 1630
ERNBACK, S. 1476 1478
ERNST, B. 1119 1955
ERNST, E. 444
ESKRIDGE, P. S. 1268
ESPOSITO, S. 2148 2149 2150
ESSEX, H. E. 1596
ESTES, E. H., JR. 2242
ESTRADA-PARRA, S. 1755
ETCHEVERRY, M. A. 1051
ETIENNE, J. 2180
ETO, W. H. 371
EVANS, D. J., JR. 1401
EVANS, E. E. 1446
EVANS, E. I. 2214 2215
EVANS, J. R. 1882
EVANS, L. A. J. 1233
EVANS, R. J. 1580
EVANS, R. T. 2363
EVANS, S. B. 1079
EVANS, T. H. 29 1672 2476
EVVA, F. 820
EWALD, R. A. 912 1581 2107
EWERT, D. L. 1423
EXCELL, B. J. 497 1991

FABIAN, F. W. 30
FABISCH, P. 1437
FAHRENBACH, M. J. 2178
FAIRHEAD, E. C. 547
FARINA, L. V. 114
FARKAS, E. 881
FARMER, W. J. 2459
FARNSWORTH, V. 1801
FARQUHAR, S. 966
FARRAS, R. P. 394
FARRELL, L. N. 285 393
FARROW, S. P. 1967
FAVILLE, L. W. 31 67
FAVRE, J. 1076
FAYET, M. T. 1202
FEDER, J. C. 1715
FEDIN, E. I. 967
FEDOR, E. J. 1942 1943
FEE, W. 1252
FEINGOLD, D. S. 182 1871 1872 1883
FEKETE, G. 1968
FELBINGER, W. 888
FELDMANN, M. 1673
FELLIG, J. 1391
FELTZ, E. 32
FERNANDES, A. D. L. 1895 1901
FERNBACH, A. 33
FEROCI, M. 1158

FERRIS, A. C. 1564
FESSEL, W. J. 1507
FIALA, M. 1203
FIELD, B. D. 2345
FINGER, I. 1756
FISCHER, E. 701
FISCHER, E. H. 290 2002
FISHEL, C. W. 1411 1504 1561 1626
FISHMAN, M. M. 395 465
FITKO, R. J. 1890
FITZGERALD, J. G. 1674
FITZGERALD, R. J. 2249 2305 2306 2335 2359
FITZMAURICE, C. 1238
FJELLSTROM, K. E. 1838
FLEMING, I. D. 652
FLEMING, J. W. 2151
FLETCHER, F. 1508 2201
FLODIN, P. 452 1295 1296 1297 1305
FLORINI, J. R. 1302
FLOTTE, C. T. 2179 2186
FLYNN, J. H. 821
FODOR, T. 1867
FOLINAZZO, J. F. 70 71
FONG, K. 887
FOOD AND DRUG ADMIN. 1249 2003 2425
FORSUM, E. 1298
FORSYTH, W. G. C. 122 123
FORT, C. A. 2416
FORTIER, A. A. 1890
FOSTER, A. B. 653 654
FOSTER, F. H. 396 397 913
FOSTER, J. F. 868 869 896
FOSTER, T. S. 914
FOWLER, F. L. 548
FRAHN, J. L. 655
FRANK, H. P. 549 798
FRANK, N. 1132
FRANKS, N. E. 1239 1480
FRAWLEY, J. P. 2159 2195
FREEDMAN, M. L. 2334 2349 2359
FREEMAN, P. G. 2463
FREIREICH, E. J. 2166 2167
FRENCH, D. 714 715
FRENCH, G. R. 1423
FRIBERG, U. 1049 1050 1969
FRIC, I. 474
FRICK, C. A. 1560
FRICK, G. 1065
FRIEBOLIN, H. 1187 1191
FRIEDBERG, D. 1868
FRIESE, R. 2022 2087
FRISONE, G. J. 398
FROEMBLING, K. 771
FROMM, A. A. 1702 2134
FRUMIN, A. M. 1651
FRUSH, H. L. 508 509
FU, J. C. C. 1280
FUJII, S. 1369
FUJIMOTO, F. 756
FUJIMOTO, K. 627 755
FUKAWA, K. 1334 1335 1448
FUKUDA, M. 1337
FUKUI, G. M. 1869

FUKUI, K. 2275 2276 2364
FUKUI, Y. 2275 2276 2364
FUKUMOTO, J. 291 307 319 320 358
FUKUSHIMA, M. 1099 1100
FUNDER-NIELSEN, T. D. 2283 2339 2340
FURGALA, B. 610 611
FURMAN, R. H. 1360
FURTH, F. W. 1569 1594
FURUHATA, T. 1334 1335 1448
FUSE, N. 1483

GABBIANI, G. 1250
GABDULLINA, G. K. 1459
GABERT, A. 2437
GABLER, G. 1970
GAGNAIRE, D. Y. 2506
GAINES, S. 34
GALANOS, C. 595
GALE, C. 1256
GALKOWSKI, T. T. 623
GALLO, A. 1120 1121 1122
GALLO, G. G. 809
GALLOP, R. C. 1886
GANLEY, O. H. 1881
GARATTINI, S. 1926
GARBY, L. 1251 2152
GARDELL, S. 792 2247
GARDNER, B. 915 968
GARDNER, E. 124 973
GARDNER, F. H. 2216
GARLICK, D. G. 2153
GARVAN, J. M. 916
GARVIE, E. I. 35 95
GARVIE, W. H. H. 1582
GARZA, R. 1085
GASKINS, J. R. 2166 2167
GAUDIANO, A. 1509 1510 1511
GAWRONSKI, T. H. 2322
GAZDAR, A. F. 1204
GECKELER, W. R. 1804
GECKLER, W. 1809
GEHRING, F. 2307
GEIER, M. 1214
GEISSEL, D. 699
GEKKO, K. 969 970 1188 1189 1195
GELIN, L. E. 1583 2217 2218 2219 2479
GELOTTE, B. 1295 1299
GELZER, J. 1757 1758
GENCO, R. J. 2363
GENGHOF, D. S. 183 221 222 223 247 1720
GEOGHEGAN, M. J. 2453 2454
GEORG, A. 628
GEORGES, L. W. 684 696
GERMAINE, G. R. 2273 2277 2278 2279 2293
GHANTA, V. K. 1123 1454 1456 1810 1811 1816 1817 1818
GHIO, M. T. 1509 1510
GIANTURCO, F. A. 822 823
GIBBONS, R. J. 2250 2251 2266 2280 2281 2295 2335 2336 2350 2351 2352
GIBLIN, A. G. 345 1621

GIBSON, J. G., II 1566 1567
GIDLEY, J. L. 2441
GIEBISCH, G. 2154
GIGLIO, D. M. 36
GILANYI, T. 439 900 901
GILBERTSON, F. E. 467
GILL, G. J. 998
GILLAM, I. C. 709
GILLES, K. A. 999
GILLESPIE, R. E. 2082
GILLINGHAM, J. 1273
GILROY, J. 2220
GIRARD, M. L. 1348
GIRI, K. V. 656
GIROUD, J. P. 1944
GITZELMANN, R. 2046 2067 2068 2072 2073
GLAESER, W. 448
GLASS, C. A. 824
GLAUDEMANS, C. P. J. 689 1727 1812
GLICKSMAN, M. 2426
GLYNN, L. E. 1675
GOCHO, S. 310
GOERLICH, E. 2477
GOHR, H. 1016
GOL'DMAN, I. L. 1584
GOLBERG, L. 1252 1253 1254 1262 1278
GOLD, V. 902
GOLDBERG, R. J. 1858
GOLDENBERG, M. 1971
GOLDMAN, B. M. 2313
GOLDSTEIN, I. J. 550 712 748 749 750 1614 1615 1616 1617 1618 1619 1620 1625 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1643 1648 1652 1653 1657 1658 1659 1660 1661 1662 1663 1664 1719
GOLDSTEIN-LIFSCHITZ, B. 2507
GOLODETZ, A. 1993
GOODMAN, A. 204 214
GOODMAN, J. W. 1759 1760 1761 1762 1763
GOODMAN, R. A. 898
GORBUNOV, P. T. 414
GORDON, J. L. 1580
GORIN, P. A. J. 1638
GORMAN, J. 367
GOTH, A. 1903 1904 1905 1906
GOULD, I. A. 2429
GOZSY, B. 1907 1908 1909 1910 1911 1912 1913 1914 1915 1927 1928 1929 1930
GRABAR, P. 1703
GRAESBECK, R. 1279
GRAF, W. 1049 1050 1969
GRAFF, M. 1899
GRAHAM, H. D. 1447
GRAHAM, W. D. 449 450
GRANATH, K. A. 435 451 452 453 454 455 456 464 544 825 834 917 971 1116
GRANT, P. M. 242 644 746
GRANT, W. C. 2178
GRASSET, E. 1370 1392 1393
GRAVES, I. L. 1512
GRAY, C. J. 345 1621
GRAY, G. M. 2044 2074 2075

GRAY, I. 1972 1973
GREEN, J. H. S. 826
GREENKORN, R. A. 2440
GREGERSEN, M. I. 972
GREGOR, A. 2125
GREY, H. M. 1813
GRIMES, A. J. 1234
GRIMES, J. H. 2434 2435
GRINBERG, V. Y. 967 1513
GRISHIN, G. I. 1124
GROENWALL, A. 772 1371 1702 1704 1705 1974 2108
2109 2110 2111 2112 2113 2114 2479
GROPPER, A. L. 2115 2116
GROSSMUELLER, F. 1498
GROTH, T. 2145
GROTTE, G. 2145 2152 2155 2156
GRUBB, R. 1950
GRUBER, U. F. 2117
GRUENWEDEL, D. W. 1280
GRUEZO, F. 1790
GRUPP, U. 2091
GRUSHETSKII, K. M. 897
GUBENSEK, F. 1205 1206
GUEST, M. M. 2106
GUGGENHEIM, B. 318 544 2282 2308 2309 2310 2311
2314 2327 2328 2337 2353 2372
GUGLIEMELLI, L. A. 2464
GUILLO, P. J. 1245
GULOV, V. YA. 886
GUNNER, B. W. 916
GUNYA SMITH, Z. H. 1658
GYERMEK, L. 1968

HACKEDORN, H. M. 2254
HACKLEY, B. M. 1017
HADDING, U. 1839 2500
HADDOW, A. 1255
HAEMMERLING, U. 1676
HAGIWARA, S. 33
HAIDER, K. 2459
HAINING, C. G. 1916
HALL, A. N. 2 3
HALL, H. H. 2394
HALL, M. 1372
HALLER, R. 2309
HALLER, W. 494
HALLING, M. S. 403
HALLMARK, J. 194
HALPERN, B. N. 1897 1898 1917 1918 1919 1920
HALSTED, J. A. 1017
HALVORSON, H. 367
HAMADA, S. 640 2312
HAMAUZU, Z-I. 368
HAMBRAEUS, L. 1298
HAMBURG, M. 2465
HAMDY, M. K. 124 399 973
HAMER, D. 1394
HAMILTON, D. M. 125 1723
HAMILTON, J. K. 503 999
HAMLIN, N. M. 1123 1454 1810 1811 1818
HAMMARSTROM, S. G. 1794

HAMMOND, B. F. 2329
HANESSIAN, D. 1239
HANNA, C. H. 1932 1933
HANNGREN, A. 1975
HANRAHAN, V. M. 361
HANSBURG, D. L. 1814 1815
HANSEN, H. 1020 1021
HANSON, R. W. 1345
HANSSON, E. 1952 1975
HAQ, S. 751
HARADA, H. 1317
HARADA, T. 657 2478
HARBINSON, R. J. 523
HARDENBERGH, E. 1893
HARDWICKE, J. 1585 1586 1587
HARDY, C. J. 2436
HARE, M. D. 2517
HARISDANGKUL, V. 1764 1765
HARLANDER, S. K. 2293 2321
HARMAN, R. 315
HARMER, D. S. 2199
HARMON, J. M. 467
HARPER, D. R. 1577
HARRFELDT, H. P. 1977
HARRIS, J. M. 1921 1922 1948 2157
HARRIS, P. M. 1363
HARRIS, R. H. 37
HARRIS, W. W. 2440
HARRISON, J. H. 2118
HART, P.D'A. 1870
HARTHILL, J. E. 1387
HARTIGAN, J. 243 245
HARTMAN, F. W. 1976
HARTMANN, J. 827 859 860
HARTMANN, T. F. 410
HASSID, W. Z. 551
HASSING, G. S. 1619 1640 1641
HATT, B. W. 488 489 645
HAUCK, A. L. 1947
HAUG, A. 828 878 879 1167 1168 1197 1329
HAVERKAMP, J. 672
HAWKINS, W. L. 560 1672
HAWLEY, S. A. 974 975 976
HAWORTH, W. N. 2455
HAY, G. W. 615 658
HAYASHI, H-O. 2316
HAYASHI, J. A. 2365 2366
HAYASHI, S. 1317 1375
HAYNES, W. C. 38 43 773 774 775
HAYS, G. L. 39
HEATHECOTE, J. G. 40
HEGEDUES, L. 1036
HEHRE, E. J. 41 42 125 126 127 147 148
149 150 151 152 153 154 155
183 184 215 216 217 218 219
220 221 222 223 247 248 258
278 279 400 526 723 724 1041
1042 1043 1642 1677 1678 1679 1690
1706 1707 1720 1721 1722 1723 1724
1725 1726 1730 1731 1732 1738 1739
1740 2004 2025 2105 2130
HEIDELBERGER, M. 1727 1755 1766 1767 1768
HEINICKE, D. 211

HEINKEL, K. 2091
HEJLEK, J. 907
HELGELAND, K. 2331
HELLER, P. 1803
HELLMAN, N. N. 156 160 173 174 401 476 524 875 883 936
HELLSING, K. 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1859
HENDERSON, R. H. 30
HENDRICKSON, A. P. 2001
HENZE, K. 1257
HERMAN, E. H. 1947
HERP, A. 784
HERS, H. G. 2070
HERTLEIN, W. 978
HESSE, V. 1247
HESSELTINE, C. W. 38 43
HESTRIN, S. 157 182 213 224 225 226 280 281 1487 1866 1871 1872 1873 1874 1878 1883 1884
HEWITT, M. J. 2261
HEYN, A. N. J. 292 829
HEYNE, B. 2437
HIBBERT, H. 29 138 547 548 560 1672 2476
HIBBS, J. W. 1256
HICHENS, M. 1397
HICKS, M. A. 2313
HICKSON, J. L. 667
HIERHOLZER, G. 1977
HIGGINBOTHAM, R. D. 1395
HIJMANS, W. 1680
HILBERT, G. E. 617 661 686 1127
HILER, M. J. 2460
HILL, E. C. 31
HILL, F. W. G. 328 2077
HILL, P. 1353
HIMMELSPACH, K. 595 603 692 693 694 1455 1681
HINES, G. E. 390
HINSHAW, L. B. 2158
HINT, H. C. 918 1018 1610
HIRAMOTO, R. N. 1123 1454 1456 1810 1811 1816 1817 1818
HIRAOKA, N. 307 319 320 358
HIROMI, K. 368 636
HIROSE, T. 307
HIROSHIMA, G. 735
HIRST, J. W. 1813
HIRST, SIR E. 521
HIXON, R. 1666
HOAG, M. S. 1271
HOBAN, N. 612 679
HOBBS, J. R. 1019
HOBSON, P. N. 362
HODGE, J. E. 747
HOENDERS, H. J. 963
HOENE, R. 1795 1923
HOFFMANN, D. J. 2450
HOFMANN, E. 1110
HOLBOROW, E. J. 1675 1680
HOLLERMAN, C. E. 1631 1632
HOLLO, J. 128 457 458 506
HOLM, S. 1312
HOLMAN, J. 1903

HOLT, N. B. 460 938
HONMA, T. 702
HOPE, P. H. 91
HOPPER, J. E. 1828
HORISBERGER, M. 552 732
HORNING, E. S. 1255
HORNUFF, G. V. 1125
HORODNICEANU, F. 1432
HORSLEY, M. 1044
HORTA, A. 437
HORWITZ, C. 977
HOSCHKE, A. 506
HOTZ, P. 2353
HOUGH, L. 507
HOUSSET, E. 2180
HOVEY, M. M. 958
HOWARD, J. G. 1671 1673 1682 1683 1684 1685
HOWARD, J. M. 2159 2194 2195 2221
HOWE, E. E. 2297
HOWELL, A. 2355
HU, C. C. 1900
HUBBARD, D. 1588 1601
HUCKER, G. J. 44 45 46
HUGHES, R. C. 659
HULTIN, E. 297 321 322 402
HUMMEL, B. C. W. 495
HUNTER, M. J. 547
HUSEMANN, E. 978 1130 1131 1132 1978
HUSZAR, J. 2468
HUTCHISON, C. A., III 1087
HUTSON, D. H. 244 342 343 346 347 351 587 588 589 590 649 650 682
HUTT, M. S. R. 1234
HUTTON, R. D. 1423

IACONO, V. J. 2330
IGARASHI, K. 702 710 711
IMRIE, F. K. E. 2385
INABA, Y. 1099 1100
INGELMAN, B. 101 293 403 772 830 831 919 1314 1371 2108 2109 2110 2119 2120 2121 2122 2219 2479
INGLES, D. L. 785
INGLETT, G. E. 747
INOUE, Y. 1316
IOTOV, M. 1230
IRIKI, Y. 248
IRISAWA, J. 702
ISBELL, H. S. 459 460 508 509 516 938 942 943 945 1004 1153
ISENBERG, D. L. 323
ISHAK, M. F. 786
ISHIDA, N. 1146
ISHIKAWA, S. 1434 1435
ISHIMORI, A. 1396
ISONO, M. 133
ISRAELS, M. C. G. 2238
ITAYA, K. 185
ITO, A. 336 337 338 339 340 357
IVANOVA, N. V. 897
IVANYI, L. 1589

IVERIUS, P. H. 1524 1525
IYER, R. N. 1634 1635 1643 1648

JACKMAN, E. H. 450
JACKSON, L. J. 1090
JACKSON, R. W. 146
JACOBAEUS, U. 1590
JACOBSSON, L. 1020 1021 1709 1710 1711 1712
JACQUES, P. J. 1870
JAFFE, E. 1041 1042 1043 1690 1730 1731 1732
JAFRI, J. 47
JAHNS, H. O. 2440
JAMES, A. E. 411 537
JAMES, G. P. 2386 2387
JAMES, J. A. 2160
JANADO, M. 1354 1355
JANAT, J. 907
JANES, J. M. 2223
JANETT, M. 2093
JANSON, J-C. 324 325 326 327 1477 2356
JANUSZEWICZ, I. 48 49 50 129
JASBIK, W. 2209
JASMIN, G. 1924 1925 1979
JAWORSKI, H. L. 2222
JEANES, A. 130 131 158 249 306 510 520 553 555 576 584 596 660 661 773 774 775 832 1126 1127 2076 2427 2466 2480 2508
JELLUM, E. 1128 1277 1281
JENNER, H. 461
JENNESS, R. 2431
JENNINGS, H. J. 673 812
JENSEN, C. E. 1190
JENSEN, R. E. 1022
JINDRA, L. 907
JOCIUS, I. B. 1819 1820 1821 1822 1836
JOHANSSON, G. 1077
JOHNSON, G. D. 1675
JOHNSON, M. C. 2338
JOHNSON, M. K. 51
JOHNSTON, D. D. 2254
JOHNSTON, E. V. 2123 2223
JOHNSTON, I. R. 733
JONES, A. R. 1951
JONES, A. S. 1129
JONES, J. K. N. 497 554 1718 1991
JONES, R. W. 249 505 555 596 597 629 920 1526
JOO, I. 1875
JORDAN, H. V. 2249
JORGENSEN, B. B. 369
JORGENSEN, E. 662
JORGENSEN, O. B. 369 370 662
JORI, A. 1926
JOSEPH, N. R. 1573
JOSHI, V. K. 294
JOSSA, P. 2224
JOZSA, L. 2181
JUBERT, P. 52
JUNG, F. 1970
JUST-VIERA, J. O. 2204

KABAT, E. A. 580 671 685 1686 1728 1742 1743 1744 1745 1746 1748 1750 1751 1753 1756 1757 1758 1759 1760 1761 1762 1764 1765 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1789 1790 1792 1793 1794 1796 1797 1798 1808 1825 1860 2505
KAGA, T. 2420
KAGEDAL, L. 1449 1452 1457 1458 1468 1694
KAIZERMAN, S. 1151
KALACHEVA, N. V. 1459
KAMERLING, J. P. 674
KANAMARU, S. 567
KANE, J. A. 608 1787
KANIUGA, B. 53 776 777
KAPAIMATIS, B. 2250
KAPITONOVA, L. S. 921
KAPROS, C. E. 1734
KARA-MURZA, S. G. 1040
KARADY, S. 1936
KARAKAWA, W. W. 608 1787
KARLSSON, R. 1279
, . 1644
KASAI, G. J. 56
KATAGIRI, H. 259 260 691
KATO, K. 339 546 2304
KATO, L. 1907 1908 1909 1910 1911 1912 1913 1914 1915 1927 1928 1929 1930
KATOH, Y. 1097
KAUFMAN, M. 1400
KAWANO, T. 1591 1592
KAYE, M. A. G. 1129
KAYSER, W. 479
KEDVESSY, GY. 790
KEELE, B. B., JR. 2267
KEILICH, G. 1130 1131 1132 1185 1187 1191
KELER-BACOKA, M. 1356 1357 1527 1528 1529 1530 1549
KELLEN, J. 1358
KELLERMAN, R. 885
KELLEY, T. F. 1346
KELLUM, A. S. 2118
KELSTRUP, J. 2283 2339 2340
KEMPF, A. J. 315
KENDALL, C. E. 941
KENIRY, J. S. 1039 2388 2389
KENKARE, D. B. 2429
KENNEDY, A. E. 2366
KENNEDY, J. F. 645 833 1133 1645
KENT, J. F. 1715
KENT, P. W. 511 1331 1397
KENT, S. P. 1446
KERRY, K. R. 2084
KERTAY, M. 1867
KESSLER, L. W. 974
KESTENBAUM, R. C. 2265
KEYES, P. H. 2281 2305 2313 2354 2355
KEYWORTH, C. M. 2390
KHARAMONENKO, S. S. 414
KHOMYAKOV, K. P. 1112 1134 1135 1136 1137 1140 1164 1169 1170 1171 1183 1192 1193 2495
KHOOHUIZEN, M. 1904
KHOUW, B. T. 329

KIBRICK, S. 1425
KICIAK, M. W. 462
KIDD, A. 1756
KIDDER, D. E. 328 2077 2094
KIKUCHI, T. 557 1646
KILLANDER, J. 1300 1536
KILLEY, M. 250
KILLMANN, E. 986
KIMBLE, B. K. 231
KIMIZUKA, H. 1330 1344
KINELL, P. O. 825 834 835
KING, R. E. 1232
KING, R. N. 491
KING, W. J. 2265
KIRCHER, H. W. 512
KIRCHER, J. 54
KIRKLAND, W. D. 920
KIRUCHI, T. 556
KISS, S. 289
KITCHIN, H. 1931
KIZIUTA, Z. 74
KJELLMAN, H. 1687 1688
KLAPPACH, G. 2024
KLASSEN, R. S. 1945
KLEINBERG, W. 1899
KLEINHAMMER, G. 1455
KLEMENCIC, F. 1713
KLEMER, A. 498
KLEPPE, K. 374
KLEVAS, S. 1023
KLIER, K. 885
KLIPP, W. 2438 2439
KLOTZ, I. M. 1138 1139
KLUBINSKA, B. 412
KNAPP, R. D. 575
KNAPP, W. 1840
KNOETTNER, S. 2250
KNOX, K. W. 1788
KNUDSON, D. J. 2292
KNUTSON, R. C. 2101 2155
KNUUTTILA, M. L. E. 2284
KO, A. M. Y. 663
KOBAYASHA, T. 55
KOBAYASHI, M. 186 187 188 527 556 557 1646
2509
KOBAYASHI, T. 196 295 352 353 558 787 836
KOBLER, J. 2225
KOCH, C. 837 838 839
KOCHOLATY, W. 1560
KOENIG, J. L. 891
KOENIG, K. G. 2308 2314
KOENIG, W. 1839
KOEPSELL, H. J. 159 160 172 173 174 253 256
KOH, T. Y. 329
KOIZUMI, K. 711
KOLACHOV, P. 718 719
KOLINSKA, J. 2078 2090
KOMAR, V. P. 1170 1192 1193
KONN, V. 2391 2392
KONOPKA, L. 2124
KOPPERSCHLAEGER, G. 1110
KORN, E. D. 1359
KOSARIC, N. 330

KOSER, S. A. 56
KOSINSKI, K. 2428
KOSPETOS, K. 20
KOSTRZEWSKA, E. 2124 2125
KOTANI, S. 546
KOTO, S. 703
KOZDROJ, H. 412 2126
KOZULITSYNA, T. I. 1140
KRAMER, E. 57
KRASSE, B. 2247 2268 2272 2362
KRATZER, F. H. 2030
KRAUSE, W. 2098
KRICHEVSKY, M. I. 2252 2255 2256 2290 2326
KRITCHEVSKY, D. 1360
KRIVOSHEEV, N. P. 921 948
KROB, E. J. 1085 1091 1092 1093
KRUGER, F. A. 1351
KRYSIAK, J. 432 796 994 995 1037
KUBAT, A. 1282
KUEHN, U. 2161
KUFF, E. L. 1827
KUHNE, C. 479
KUMAGAI, K. 1426
KUNIN, C. M. 1207
KUNKEL, H. G. 979 1746 1798
KUNZ, J. 1257
KURAMITSU, H. K. 2285 2341
KURINENKO, B. M. 1459
KURNAMOTO, T. 1056
KUZNETSOVA, V. M. 14 1876 1877
KUZNETZOFF, A. A. 2013
KVIST, B. E. 456
KWEI, K-P. S. 840 1141 1142

LA MER, V. K. 2467
LABBE, P. 1923
LACHMANN, P. J. 1841
LACKO, L. 404 405 406 407 408 463 1098
1593 1961
LACY, R. 2332
LAFORET, M. T. 2216
LAGODA, A. A. 146
LAISHLEY, E. J. 16
LAKATA, G. D. 161
LALETINA, O. P. 1143 1144
LAMBERTS, B. L. 303 841 842 843 847
LAMEDICA, G. M. 2040
LAMM, O. 923
LANG, D. 1431
LANGDELL, R. D. 1594 1595
LANGENBERG, H. 1016
LANGFORD, C. T. 169 424
LANGLOIS, Y. L. 1887
LANGSJOEN, A. 1022
LANGSTON, C. W. 58
LANNEK, N. 1269
LAPANJE, S. 1205 1206
LAPUZ, M. M. 80
LARGIER, J. F. 1546
LARM, O. 559 685 1728
LARNER, J. 2079 2080 2081 2082

LARSEN, B. 878 1167 1208
LARSON, R. H. 2359
LARSSON, C. 1078
LARSSON, P-O. 1460
LASSETTRE, E. N. 637
LASZLO, E. 128 457 458 506 2468
LAUNER, H. F. 788 1000 1001 1002
LAURELL, A. B. 1531
LAURENT, T. C. 464 844 1300 1414 1514 1524 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542
LAUSON, H. D. 2154
LAW, A. R. 625
LAWRENCE, L. W. 561
LAWTON, E. J. 866
LAYNE, E. C. 2182
LAZAR, I. 1968
LE PAGE, M. 496
LEACH, S. A. 2264
LEAL, L. E. 1040
LECOMTE, J. 922
LEE, J. B. 1039 2388 2389
LEE, P. K. 2467
LEE, Y-C. 675 2182 2183
LEGRAND, A. 1348
LEHMANN, H. E. 1929
LEHNER, T. 1589
LEIBNITZ, E. 175 409
LEIVA-QUIROS, A. 59
LEON, M. A. 1665 1667 1819 1820 1821 1822 1823 1824 1830 1836 1842 1843 1844 1845 1846 1847 1857
LEONARD, G. J. 513 2393
LEONARD, J. C. 410
LEPOW, I. H. 1848 1850
LEUSEN, I. R. 1596
LEVI, I. 560 789
LEVY, R. S. 1352
LEWANDOWSKI, R. 1022
LEWICKI, W. J. 561
LEWIS, B. A. 562 563 564 658 732 1622
LEWIS, J. A. 2462
LIACOPOULOS, P. 1784
LIACOPOULOS-BRIOT, M. 1784
LIAO, J. 1750 1808
LIBERTA, A. E. 304 335
LIEBERMAN, I. 371
LIEBHABER, H. 1424 1436
LIENER, I. E. 1649 1650
LIESENBERG, C. 60
LIGHT, I. 997
LIKOMSKAYA, I. S. 2016
LILIENTHAL, B. 72 2395
LILLEHEI, C-W. 2226 2236
LILLY, M. D. 1467 1473
LINDBERG, B. 16 314 514 559 565 685 704 1113 1145 1728
LINDENFELSER, L. A. 283
LINDENMANN, J. 2046 2068
LINDENSCHMIDT, W. 1055
LINDHE, J. 2356
LINDNER, H. 1980 1981 1982 1983
LINK, F. 1358

LINZER, R. 2367 2368
LIPPMANN, E. O. VON. 61
LIPTAK, A. 517
LITTLE, J. N. 492
LITTLE, N. 748
LJUNGGREN, S. 923
LLACER, V. 1945
LLOYD, K. O. 1647
LOBENE, R. R. 2315
LOCKWOOD, A. R. 411
LOCKWOOD, L. B. 690
LOEB, L. 2175
LOEFGREN, B. 1902
LOENNGREN, J. 514
LOEPER, J. 2180
LOESEL, H. 2184
LOETTERLE, R. 978
LOFTUS, L. R. 1258
LOGINOVA, L. I. 62
LOHMAR, R. L. 431 515 525
LOKEN, A. E. 2292 2320
LOLA, J. E. 332 687
LONDON, E. 1260 1373
LONG, D. M., JR. 2226
LONG, L. W. 566 2291
LONGLEY, J. B. 1053
LONGYEAR, V. M. C. 2325
LORENZ, L. 419
LORENZ, S. 728 729
LORENZO-LUACES, E. 2481
LORINCZI, F. 289
LOSTICKY, C. 477
LOVELACE, S. M. 2349
LOYTER, A. 363
LOZINSKI, E. 789
LUCAS, G. L. 1588
LUDERITZ, O. 595
LUDWIG, N. H. 476 875
LUECKEZ H. 845
LUGOVAYA, Z. A. 2026
LUKOMSKAYA, I. S. 716 717 2005 2015 2017 2028
LUND, L. A. 835
LUNDBLAD, A. 1825
LUNDY, J. S. 2101 2123 2223 2227
LUNT, E. 1003
LUSCOMBE, D. K. 2157
LUSZTIG, G. 2181
LUX, A. 2468
LYNCH, R. G. 1833
LYON, T. C., JR. 924

MACH, O. 1098
MACMILLAN, D. 846
MADAN, D. K. 2185
MADISON, R. M. 1219 1220
MAEDA, H. 1146
MAEKINEN, K. K. 331 2284
MAES, R. 1209
MAGE, R. G. 1789
MAGNA, H. 1246
MAGUIRE, A. H. 355 2319

MAHONEY, V. C. 1039
MAKINEN, K. K. 2318
MAKINO, S. 1195
MALEK, J. 404 405 406 407 408 463
MANAX, W. G. 2228
MANCINI, R. E. 1051
MANDEL, J. 933
MANDELS, M. 354
MANLY, R. S. 1024
MANN, W. V., JR. 2301
MANNERS, D. J. 372 705 734
MANSKI, W. 132 412 2126
MANSMANN, H. C., JR. 1689
MANTLE, P. G. 63
MANUJLOVA, V. P. 62
MARAGHINI, M. 980 981
MARAWAN, A. 1154 1186
MARCHESSAULT, R. H. 1194
MARCKER, K. 1190
MARIANI, E. 413 980 981 982
MARIGNAN, R. 804
MARINI, M. 1641
MARK, H. 549
MARKEVICH, S. V. 414
MARKOVA, I. YU. 120
MARSDEN, J. C. 1331
MARSDEN, N. V. B. 1013 1025 1301 1597
MARSHALL, J. J. 373 591 1147 1461 1462 1463 1464 1465 1466
MARSHALL, L. H. 1932 1933
MARSHALL, P. A. 481 892
MARSHALL, P. R. 1235
MARSTERS, J. B. 488
MARTIN, D. O. 2254
MARTIN, J. P. 2456 2457 2458 2459
MARTIN, L. E. 925 1252 1253 1254 1259 1260 1508
MARTIN, L. F. 647
MARTIN, M. M. 2215
MARTINEAU, R. S. 1648
MARTIROSYAN, T. M. 2026
MASTRANGELO, S. V. R. 465
MATHESON, A. B. 1582
MATHESON, N. A. 1577 1578
MATHIESEN, P. 2512
MATHWIG, J. E. 2240
MATSUDA, K. 186 187 188 556 557 585 616 627 641 677 678 735 736 737 738 744 752 753 754 755 756 1646 2509
MATSUMURA, G. 784
MATTOK, G. L. 865
MAUCH, W. 251 252
MAUNE, R. 2098
MAURER, P. H. 1689 1729 1773
MAXWELL, R. 1942
MAY, E. 1210
MAY, P. 1210
MAY, Z. 466 996
MAYCOCK, W. D'A. 419 926 927 1995 2127 2128 2492
MAYER, H. D. 64
MAYER, M. M. 1860
MAYER, R. M. 532
MAYERS, G. L. 1826 2499

MAYERSON, H. S. 2168 2173 2174 2175
MAYEUX, P. A. 65 66
MCBRIDE, B. C. 2342
MCCABE, M. M. 205 2286 2343 2344
MCCABE, R. M. 2355
MCCALIP, M. A. 2394
MCCANN, F. R. 933
MCCLESKEY, C. S. 1 10 13 36 51 59 67 96
MCCORMICK, J. E. 1148
MCCRAW, A. 1598
MCCURDY, R. W. 2186
MCCUTCHAN, J. H. 1211 1215 1216
MCDONALD, H. J. 803
MCDONOUGH, R. M. 1765
MCGAUGHLEY, C. 2345
MCGEE, R. M. 390
MCGHEE, J. R. 1456 1816 1818 2267 2369
MCINTIRE, K. R. 1799 1824 1827
MCINTYRE, E. R. 1261
MCKENZIE, F. N. 1577
MCKERNAN, W. M. 1212 1213 1405
MCKINLEY, R. M. 2440
MCNEELY, W. H. 2482
MCNICKLE, C. M. 2079 2081
MCTIERNAN, J. 960
MECS, I. 1266
MEHLTRETTER, C. L. 430
MEIJER, A. E. F. H. 1486 1488 1489 1490 1491 1492 1543 1984
MELIK-SARKISYAN, S. S. 1544
MELLER, A. 630 631
MELLIES, R. L. 430 431
MELVAER, K. L. 2331
MELVILLE, T. H. 27
MELVIN, E. H. 807 846 1006
MENCIER, F. 296
MERCER, G. A. 705 734
MERRICK, J. M. 1631
MERRIL, C. R. 1214
MESSER, M. 2032 2083 2084
MESTECKY, J. 2369
MESTER, L. 1149 1283
METCALF, W. 467 1026 2105 2129 2130
METTIER, S. R. 1272
METZENDORF, J. 434
MEYER, H. 229
MEYER, J. S. 2220
MEYER, L. M. 1565
MEYER, T. S. 841 843 847
MICHALEK, S. M. 2369
MICHALSKA, I. 1034
MICHL, J. 1698
MIERS, J. C. 130
MILAZZO, S. C. 1680
MILLER, A. 1091
MILLER, D. W. 2213
MILLER, F. D. 2417
MILLER, I. L. 684 696
MILLER, J. N. 1150 1290
MILLER, K. D. 364
MILLER, L. S. 1079
MILLICAN, R. C. 1053 1985

MILLS, J. A. 655
MINAKOVA, A. L. 298 2006 2012
MINO, G. 1151
MINOR, A. H. 1599
MIODUSZEWSKI, J. Z. 1152
MISAKI, A. 133 305 546 567 568 574 757
1315 1638 1639 2483 2514
MISAWA, T. 1317
MITCHELL, H. K. 99
MITCHELL, P. 983
MITCHELL, R. 37
MIYAHARA, Y. 930
MIYAJI, H. 568 574 757 1315
MIYAKE, T. 270
MIYAZAWA, F. 1398
MIZUNO, J. 2312
MOCZAR, E. 1149
MOELLER, G. 1574 2503
MOGENSEN, C. E. 2162
MOHAY, J. 790
MOLLISON, A. W. 2163
MONAGHAN, P. H. 2441
MONCRIEF, J. A. 2234 2235
MONCRIEFF, A. A. 2039
MONDOVI, B. 791
MONOYER, A. 68
MONTGOMERY, E. M. 377 617 686
MONTGOMERY, R. 503 1622 1623
MOODY, G. J. 848 864 865
MOORE, J. C. 1289
MOORE, J. S. 1332
MORA, P. T. 1229
MORI, T. 1330 1483
MORISHITA, M. 1099 1100
MORITA, H. 849 850
MORIYAMA, T. 2275 2276 2364
MORR, C. V. 2429 2430 2431
MORRIS, E. R. 2504
MORRISON, A. B. 2187
MORRISON, J. L. 1934
MORROW, W. L. 821
MOSBACH, K. 1460
MOSIMANN, H. 1371 2041
MOSS, G. F. 1231 1238
MOUSTAFA, A. M. 116
MOWRY, R. W. 1052 1053 1985
MOYER, J. D. 508 516 1004 1153
MOYLE, J. 983
MUEHLEMANN, H. R. 2308 2310
MUELLER, A. 1236
MUELLER, E. P. 2442
MUELLER, H. E. 1333
MUELLER, M. 911 2090
MUELLER-EBERHARD, H. J. 1849
MUERSET, G. 2033 2034
MUIR, A. R. 1262
MUKASA, H. 2346 2347 2348 2370
MUKHERJEE, A. M. 1285 1286
MUKHERJEE, K. L. 2131
MUKHERJEE, S. 1194
MUNDT, J. O. 69
MURAWSKI, K. 432 796 994 995 996 1037
MURAYAMA, Y. 2312 2316

MURDOCK, D. J. 70 71
MURPHY, P. T. 2484
MUSSETT, M. V. 1374
MUSTAFA, A. 1154
MUZAFFAR, T. Z. 1545
MYRBACK, K. 613 618 632 706
MYRIN, P-A. 1477
MZHEL'SKII, A. I. 886

NADEL, H. 134
NADZIAKIEWICZ, H. C. 851 889
NAGAMATSU, S. 1443
NAGASAWA, K. 1316 1317 1375
NAGASHIMA, A. 1443
NAGEL, K. H. 1955
NAGLER, M. 1903
NAGY, S. 1030 1936
NAHMIAS, A. J. 1425
NAKAMURA, K. 599
NAKAMURA, M. 745
NAKAMURA, Y. 726
NAKOINZ, I. 1429
NALBANDIAN, J. 2349
NANASI, P. 517
NASH, W. L. 1903
NAVIA, J. M. 2267
NAWROCKI, J. 132
NEAL, A. L. 25
NEAL, M. W. 1302
NECHELES, H. 2230
NEELY, W. B. 189 190 191 192 193 194 195 227 282 852 853 2485
NEILL, J. M. 41 1041 1042 1043 1679 1690 1720 1722 1724 1730 1731 1732 1733 1734 1735 1736 1738
NEMES-NANASI, E. 928 929
NEUMUELLER, G. 518
NEWBRUN, E. 165 2272 2282 2287 2288 2289 2294 2317 2332
NEWMAN, H. N. 2358
NICHOLSON, L. W. 718 719
NICHOLSON, R. I. 72 1044 2395
NICKERSON, W. J. 1853
NIEDUSZYNSKI, I. A. 799
NIELSEN, M. A. 2430
NIOBE, M. 196
NISHIDA, T. 1350 1354 1355 1361
NISONOFF, A. 1828
NISSELBAUM, J. S. 1345
NIVEN, C. F., JR. 26 73 74 75 97 2257
NIWA, Y. 302
NOACK, R. 2087
NOALL, M. W. 1450
NOGUCHI, H. 969 1188 1189 1195 1403
NOMURA, H. 930
NORDEN, A. 1263
NORDIN, J. H. 743
NORDSTROEM, C. 2061
NORDSTROM, L. 297 321 402
NORRMAN, B. 544 1114 1115 1155 1156 1157
NORSETH, T. 1275

NORTHCOTE, D. H. 984
NORTHERN UTIL. RES. DEV. DIV. 415
NOTT, J. 195
NOVAK, L. J. 2460
NOWICKA, A. 1034
NYGAARD, M. 2280 2336
NYKOWSKI, I. 1034
NYMAN, S. 2356
NYNS, E. J. 1062 1068

O'MANT, D. M. 731
O'NEILL, A. N. 623 637
O'NEILL, S. P. 1467
OADES, J. M. 2461
OEBRINK, B. 1542
OEHME, F. 854 855
OERSKOV, J. 76 77
OESTLING, S. G. 1025 1027 1597
OGAMO, A. 1375
OGINA, S. 162
OGISO, T. 336 339
OGSTON, A. G. 468 856 966 1506
OHIN, A. 2105
OHKUMA, S. 1448
OHTA, T. 1337
OHWADA, Y. 276
OKA, S. 1402
OKADA, G. 221 222 223
OKADA, S. 722
OKAMOTO, R. H. 1048
OKHUMA, S. 1334 1335
OLAVARRIA, J. M. 2027
OLDFIELD, J. F. T. 2396
OLIJNYK, O. R. 1398
OLITZKI, L. 1878 1879
OLIVEROS, S. B. 2421 2432
OLNESS, A. E. 2450
OLSEN, E. 78
OLSON, G. A. 2371 2372
OLSON, M. O. J. 1649 1650
OLSSON, J. 2247
ONCLEY, J. L. 1362
ONO, H. 620 741
ONO, S. 368 636
ORATZ, M. 2188
ORSZAGH, A. 931 985
OSINCHAK, J. 2072
OTT, H. 699
OUGH, L. D. 619
OUTSCHOORN, I. M. 1790
OVEREND, W. G. 1318
OVODOV, Y. S. 519 989 1161
OWEN, W. L. 2397 2398 2399 2400 2401 2402 2443
2444 2445 2446 2447 2448 2486 2487
OXFORD, A. E. 8 79 118 119
OZAKI, Y. 1426

PACE, J. 40
PAGANO, J. S. 1211 1215 1216 1427

PAINTER, T. J. 633 786
PAKULA, R. 141 142 143
PALADE, G. E. 2169
PALMSTIERNA, H. 792
PALO, M. A. 80
PAN, S. C. 718 719
PAPAVIZAS, G. C. 2462
PAPAZIAN, L. A. 1200
PAPINI, P. 1158
PAPP, M. 81
PARKER, R. B. 2357
PARKINSON, T. M. 2007 2008
PARRISH, F. W. 332 355 499 687 2319
PARSONS, K. 1175
PASIKA, W. M. 569 570 571 857 858 1005 1159 1160 1336 2510
PASTEUR, L. 82
PATAT, F. 163 207 228 229 230 771 827 859 860 861 862 986
PATON, N. 2405
PATRICK, W. C., III 1418 1433
PATRY, O. 450
PATYRA, S. 1267
PAUNIO, I. K. 331 2318
PAUTARD, F. 426 535
PAUTARD, F. G. 411 416 863
PAVLENKO, A. F. 1161
PAVLOVIC, V. 572
PAYNE, H. G. 1376 2138
PAZUR, J. H. 374 608 720 721 722 739 740
PEARCE, R. H. 914
PEAT, S. 83 362 573 664 1484
PEDERSON, C. S. 44 46 84 102
PEGLER, H. F. 652
PENENZHIK, M. A. 1134
PENNELL, R. B. 1409
PERERA, C. B. 1651
PERHAM, R. N. 1799
PERIC, B. 972
PERLES, R. 1028
PERLIN, A. S. 634
PERNECZKY, L. 2181
PERQUIN, L. H. C. 85
PERRY, M. B. 507 1718
PERRY, W. L. 1374
PERSSON, B. H. 1054 1986 1987 1988 2009
PERSSON, H. 844 1414 1532 1535
PERTOFT, H. 1101
PETERS, J. 246
PETROVA, L. I. 308
PETROVIC, J. 1399
PETROVIC, S. 1399
PETTI, G. 1509 1510 1511
PETTIJOHN, D. E. 1076 1080 1081
PETTY, J. 679
PFANNEMUELLER, B. 806
PFEIFER, V. F. 417
PHARMACIA FINE CHEMICALS. 1217 1218 1303 1304
PHARMACIA. 2132 2229
PHILIPSON, L. 1066 1074 1400 1413 1414
PHILIPSON, P. E. 1014
PHILLIPS, C. E. 1993
PHILLIPS, D. R. 1570

PHILLIPS, E. B. 1881
PHILLIPS, G. O. 848 864 865 1332
PHILLIPS, L. L. 365
PICK, E. 1428
PICKERT, H. 2164
PICKUP, D. M. 1600
PIETRA, D. D. 2038
PIKE, B. G. 1601
PILLEMER, L. 1850 1851 1852 1856
PILLOW, R. P. 1237
PINKARD, F. W. 2455
PINKES, A. H. 1734 1735 1736
PITTET, A. O. 709
PITTS, R. F. 2154
PLATTNER, R. D. 576
PLESCIA, O. J. 1853
PLOTKIN, S. A. 1225
PLOUGH, I. C. 1497 2104
PLYSHEVSKAYA, E. G. 1552
POLIZZI, M. 1511
POLLARD, A. L. 98
POLSON, A. 1546
POLUSHINA, T. V. 14 120 418 905 906 2133 2134
PONDER, E. 1547 1548 1602 1603
PONDER, R. V. 1547 1603
PONTIERI, G. M. 1853
POOLE, D. F. G. 2358
POPPER, H. L. 1971 2230
PORATH, J. 324 1084 1295 1305 1306 1307 1308 1309 1474 1475 1476
PORETZ, R. D. 1636 1652 1653
PORTEOUS, J. W. 1095
POTGIETER, G. M. 1546
POTTER, M. 1802 1808 1827 1829 1830 1831
POULSEN, K. A. 77
POWELL, H. L., JR. 2267
POYSER, R. H. 1935 2157
PRADER, A. 2033 2034 2036 2056 2085
PREEDY, J. R. K. 1029
PREOBRAZHENSKAYA, M. E. 298 1654 1655 1656 1876 1877 1880 2006 2010 2011 2012
PRESCOTT, S. C. 2488
PRESSMAN, D. 1826 2499
PRESTON, J. A. 1882
PRETLOW, T. G. 1454 1810
PRICE, F. P. 866
PRIDHAM, T. G. 283
PRITCHARD, J. A. 1264
PROEHL, E. C. 1493
PROSZYNSKA, K. 1102
PRYCE-JONES, J. 86
PRYOR, L. D. 69
PRYZWANSKY, K. 1749
PTITSYN, O. B. 867
PUCAR, Z. 1527 1530 1549
PULASKI, E. J. 1714 1946 1972 2116 2231
PULKOWNIK, A. 359 380 593 2511

QUELCH, S. 1699 1795
QUINN, E. J. 622

RABINOWITZ, M. L. 1461 1463 1465 1466
RABINOWITZ, R. 395
RACKER, E. 1431
RADHAKRISHNAN, A. N. 2096 2097
RADOLA, B. J. 1310 1311
RAGEN, P. A. 1237
RAISZ, L. G. 2115 2116
RALL, D. P. 2167
RALPH, P. 1429
RAMPLING, M. W. 1550 1604
RAMSEY, N. W. 1233
RANDLES, C. I. 134
RANKIN, J. C. 520
RANSBY, A. 1857
RAO, P. L. N. 656
RAO, V. S. R. 868 869
RASCHKE, W. C. 1429 1835
RATCLIFFE, A. H. 2201
RATHONYI, Z. 457
REBERS, P. A. 1718 1768
REDEI, A. 1030 1936
REEMTSMA, K. 987
REES, D. A. 521 870 1319 2504
REESE, E. T. 332 354 355 499 687 2319
REEVES, R. E. 522
REGGIANI, M. 808 809
REGOLATI, B. 2308 2310
REHM, H-J. V. 2489
REHN, J. 1977
REICHERT, C. M. 1638 1639
REID, E. 1094
REID, W. 2290
REINEFELD, E. 1046
RELTOVICH, G. V. 948
RENDLEMAN, J. A., JR. 688
RENFREW, A. G. 793
RENKIN, E. M. 2153
RENNIE, J. B. 2163
REYNOLDS, G. F. 1232
RIBLET, R. J. 1832
RICCARD, B. A. 2178
RICE, C. E. 1854
RICE, J. M. 1219 1220
RICHARDS, G. N. 316 317 333 334 513 545 1045 1177 2393 2403
RICHARDS, S. J. 2458
RICHARDSON, A. 335
RICHARDSON, A. P. 1934
RICHARDSON, N. G. 521
RICHARDSON, S. H. 1401
RICHTER, J. 816
RICHTER, W. 1468 1574 1605 1611 1691 1692 1693 1694 1695 1696 1697 1859 1861 1862 1937
RICKARDS, T. 784
RICKETTS, C. R. 419 871 926 927 1162 1163 1212 1213 1238 1318 1320 1321 1322 1363 1372 1377 1378 1379 1380 1381 1382 1386 1410 1551 1585 1967 2103 2165 2492 2493
RICKWOOD, D. 1481
RIDDICK, J. A. 392 469
RIDLEY, M. 1612

RIGBY, P. G. 1221
RINGPFEIL, M. 164 388 409 2474
RIST, C. E. 429 504 581 629 895 998 1008 1180 1181 2469
RITTENBERG, D. 1770
ROBERTON, A. M. 344
ROBERTS, J. G. 664
ROBINSON, D. S. 1363
ROBINSON, N. 872
ROBRISH, S. A. 2252 2290
ROBYT, J. F. 231 232 2502
RODRIGUEZ, H. 90
ROE, J. H. 1031
ROEDERER, H. V. 2490
ROELLA, G. 2331 2512
ROGOVIN, S. P. 156 169 401 420 424
ROGOVIN, Z. A. 1134 1135 1136 1137 1143 1144 1164 1171 1183
ROLINSKI, Z. 1267
ROLLA, G. 312
RONQUIST, G. 1606
ROREM, E. S. 87
ROSANO, C. L. 112 113 140
ROSEN, S. 2269 2373
ROSENFEL'D, E. L. 592 1544 1552 1654 1791 1877 1880 2006 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
ROSENFELD, L. 635
ROSENQVIST, H. 2200 2232 2233
ROSEVEAR, A. 1645
ROSS, O. A. 1855
ROSSI, G. 1104
ROSSI-FANELLI, A. 791 1117
ROSSIO, J. L. 1079
ROSWALL, S. 797
ROTH, F. B. 1856
ROTHMAN, A. R. 2166 2167
ROTHMAN, S. 892 932 933 1556 1607
ROTHSCHILD, M. A. 2188
ROTILIO, G. 1111
ROUSSELOT, L. M. 467 1026 2129
ROWE, C. E. 871 934 1284
ROWE, D. S. 935
ROWE, J. J. M. 705
ROWE, K. L. 372
ROWEN, R. 1668
ROWLAND, S. P. 647
ROY, N. 689 1727
ROZANIS, J. 330
ROZENBERG, G. Y. 418 2133 2134
ROZMAN, W. 841
RUBAJ, B. 1267
RUBINO, A. 2035 2036 2037 2086 2089
RUCKEL, E. R. 500 501 502
RUDAKOVA, N. K. 2017
RUDIKOFF, S. 1802
RUDIN, L. 1082
RUEDE, E. 1470
RUEHL, H. 1420 1421 1441
RUIZ, A. R. 2449
RUNGE, H. 1055
RUNGE, W. F. 421
RUPPERT, C. 1366

RUPPRECHT, G. 181 446 447
RUSHING, N. B. 88
RUSSELL, C. R. 1174 2463 2469
RUSSELL, E. 1204
RUTHERFORD, D. 1235
RUTTINGER, L. 1608
RUTTLOFF, H. 598 2022 2098
RUTTLOFF, R. 2087
RYDEN, J. 1083
RYSER, H. J. P. 1222

SACRA, P. J. 1892
SADDINGTON, S. M. 1321
SADOWSKA, B. 1102
SAENKO, A. S. 1989 2018 2020 2023
SAGE, H. J. 1857
SAIER, M. H., JR. 609
SAIZ, E. 437
SAKAGAMI, T. 1364 1365
SAKAKIBARA, K. 305 574 604 757 1797 2514
SAKO, Y. 2159
SALMINEN, P. 1131
SALTZMAN, B. 1203
SAMAILLE, J. 1347
SAMOILOVA, L. N. 1169
SAMPLE, R. E. 1032
SAMSELL, D. 1699 1795
SAMUELSSON, E-G. 1312
SANCHEZ, L. 2226 2236
SANCHEZ-MARROQUIN, A. 89 90 91
SANDHAM, H. J. 2301
SANDOR, S. 2135
SANFORD, J. P. 1881 1882
SARKO, A. 1194
SAROJA, K. 656
SASAKAWA, S. 1088 1089
SASAKI, S. 1402 1403 1430
SATAKE, I. 1337
SATO, A. 620 741 758
SATO, T. 470 478 1479
SAUNDERS, W. M. 483
SAWAI, T. 299 300 301 302 305 375 723 724
SAWARDEKER, J. S. 873
SAWYER, R. B. 2234 2235
SAXTON, C. A. 2264
SCALES, W. R. 2291
SCARR, M, P. 92
SCHACHTELE, C. F. 356 2273 2277 2278 2279 2292 2293 2320 2321 2322 2323 2324
SCHAEFER, W. C. 505 581 582 665
SCHARF, R. 2124
SCHAYER, R. W. 1938
SCHEIBLER, C. 93
SCHEN, R. J. 1265
SCHENK, G. 180 181 208 212 277 447 1964 1965
SCHERF, G. 440 471
SCHIELTZ, N. C. 832
SCHIPPA, G. 811
SCHLIEBENER, C. 986

SCHLOSSMAN, S. F. 1792 1793
SCHLUECHTERER, E. 83 573
SCHMID, R. 2353
SCHMIDT, W. 2024
SCHMIDT-BERG-LORENZ, S. 251 252
SCHMITT, M. K. 2320
SCHMITZ, H. 1990
SCHNEIDER, C. H. 1698
SCHNEIDER, F. 1046
SCHNEIDER, G. 1104 1105
SCHOEN, M. 33
SCHOENBERG, M. D. 1851
SCHOLNICK, P. 1431
SCHOLZ, R. 1964 1965
SCHORLEMMER, H. U. 2500
SCHRAMM, M. 363
SCHREIBER, S. S. 2188
SCHROEDER, H. E. 2327 2337
SCHUBERT, M. 1503
SCHUERCH, C. 500 501 502 700
SCHULENBURG, E. P. 1833
SCHULTZ, C. G. 920
SCHULZ, G. 1422
SCHULZ, J. 1110
SCHULZ, K. F. 484
SCHWAB, G. 668
SCHWARTZ, D. E. 1370 1392 1393
SCHWARTZ, S. M. 2463 2464
SCHWARZ, W. H. 957
SCHWEBEL, A. 932 1607
SCHWIMMER, S. 666
SCOTT, J. E. 523 792 1165 1338 1339 1340
SCOTT, K. T. B. 2434 2435
SCOTT, P. J. 1368
SCOTT, R., JR. 1569
SCOTT, T. A., JR. 524 676 1006
SCOTT, W. E. 870
SCUDDER, J. 1701
SCULLY, N. J. 135
SEAMAN, G. V. F. 953 1090 1092 1093
SEDLACEK, B. 472 473 474
SEDWICK, W. D. 1209 1225 1427
SEELEY, H. W., JR. 9 25 28 145
SEELY, T. 475 874
SEGAL, A. 2136
SEIDEL, D. 1366
SEKIGUCHI, T. 736 737
SEL'TSOVSKAYA, G. S. 94 121 1876
SELENINA, M. 164
SELYE, H. 1250 1266 1923 1939 1940
SEMENZA, G. 2037 2043 2046 2056 2078 2088 2089
2090 2093 2095
SEMPLE, R. E. 497 1032 1553 1991 2137
SEN GUPTA, P. C. 1285 1286
SENN, V. J. 88
SENTI, F. R. 420 476 524 676 875 883 884
894 936 1559
SERGIESCU, D. 1432
SERY, T. W. 2004 2025
SETO, S. 678
SEYMOUR, F. R. 575 576
SHAFER, W. G. 2270
SHAHAB, L. 1257

SHALAEVA, L. F. 876
SHARKOVA, E. F. 1287
SHARMA, M. L. 165 2294 2317
SHARPE, E. S. 253 256
SHARPE, M. E. 95
SHASHA, B. S. 1118 1174
SHAW, M. 1554
SHECHMEISTER, I. L. 2338
SHELUBSKY, M. 1878 1879
SHEN, K. P. 877 1166
SHERMAN, J. M. 73
SHEVCHENKO, A. N. 1112
SHIBASAKI, K. 254 255 614 713 725 735 745 759
SHIGA, T. 166 167 422 423 2491
SHILO, M. 1866 1868 1871 1872 1883 1884 1885
SHIMIZU, N. 1056
SHIMO, M. 166 167 422 423
SHIMOMURA, T. 651 726 727
SHINODA, A. 136
SHIRAISHI, H. 677
SHIRES, T. K. 2158
SHIREY, W. N. 1433
SHIRLEY, H. H., JR. 2168
SHISHIDO, K. 556 557 1646
SHKLAIR, I. L. 303 2253 2365 2366
SHORT, W. L. 988
SHUBINA, A. I. 2013 2017
SHUGAR, D. 1057
SHURTER, R. A. 390
SIDDIQI, I. H. 1298
SIDDIQUI, I. R. 535 610 611
SIDEBOTHAM, R. L. 539 540 577 578
SIEBERT, G. 2091
SIEFERT, E. 1187 1191
SIEGAL, D. L. 2236
SIEGBAHN, K. 830 831
SIERRA, R. 96
SIGEL, M. M. 1765
SIGRIST, H. 2042
SIITERI, P. K. 1972
SIM, A. K. 1598
SIMIONESCU, N. 2169
SIMMONS, D. A. R. 1737
SIMMS, E. S. 1833
SIMONET, M. 22
SIMONSON, L. G. 303 304 335 843 847
SIROTKINA, V. P. 14
SIRS, J. A. 1604
SITCH, D. A. 1484
SJOELIN, S. 1251
SJOESTROEM, B. 1713
SKOK, J. 135 137
SKOKOVA, I. F. 2495
SKOOG, W. A. 1609
SKRINDE, R. T. 988
SKURSKA, Z. 132
SLADE, H. D. 2346 2347 2348 2368 2370
SLOAN, J. W. 429 504 525
SLOAN, M. H. 2221
SLODKI, M. E. 576
SLONEKER, J. H. 873
SLONIMSKII, G. L. 1513

SMALL, P. A., JR. 2371 2372
SMELLIE, R. H., JR. 2467
SMIDSROED, O. 828 878 879 1167 1168 1196 1197 1329
SMILEY, K. L. 73
SMILEY, R. L. 1938
SMITH, D. C. 495
SMITH, D. J. 2330
SMITH, E. E. 168 205 1632 1635 1657 1658 2286 2343 2344
SMITH, F. 503 562 563 564 615 658 732 1622 1623 1624
SMITH, H. E. 1886 2464
SMITH, I. C. P. 673 812 842
SMITH, J. C. 1017
SMITH, J. P. 1253 1278
SMITH, M. A. 97
SMITH, M. C. 937
SMITH, P. B. 98
SMITH, R. T. 1383 1384
SMITH, W. Y. 1931
SMOLA, D. J. 988
SNELL, E. E. 99 102
SNEZHKO, V. A. 1169 1170 1171 1287
SNOOK, R. 2237
SNYDER, C. F. 460 938
SNYDER, M. L. 2254
SO, L. L. 1619 1633 1635 1636 1659 1660 1661 1662 1663 1664
SODER, G. 1978
SOERENSEN, K. H. 1172
SOHNS, V. E. 169 424
SOMERS, P. J. 488 489 625 645 663 1109
SOMOGYI, A. 1266
SONNTAG, W. M. 2092
SORG, C. 1470
SOROCHAN, V. D. 989
SOWDEN, J. C. 621
SPARLING, G. D. 1237
SPENCER, J. N. 2138
SPENCER, W. W. 1325
SPENDLOVE, J. C. 197
SPICER, S. S. 1438
SPINELL, D. M. 2295 2305 2306
SPONAR, J. 477
SPRENGARD, D. 1009
SPRIGGS, A. S. 621
SPRING, S. B. 1828
SPRINGER, R. 939
SQUIRE, J. R. 1585 1587 2103 2492
STAAT, R. H. 356 2321 2322 2323 2324
STACEY, M. 83 117 170 171 176 179 237 238 242 425 426 535 538 573 579 625 644 654 670 730 731 742 746 769 770 778 781 800 801 1129 1717 2455 2493
STADLER, E. 1313
STAHLY, G. L. 34 124 134 197 399 973
STALKER, A. L. 1545
STANEK, J. 543
STANLEY, J. L. 1886
STARNES, W. 113
STASIW, D. M. 960

STASKIEWICZ, G. 1267
STASNY, R. J. 1556
STAVELY, H. E. 135 421
STAVRI, D. 940
STEFANI, A. 2093
STEIN, E. A. 290 2002
STEINERT, V. 2024
STEINMANN, B. 2067 2068
STELLER, R. 1825
STEPHEN, A. M. 961
STERBA, O. 1961
STERN, K. G. 203 204 214
STERNBERG, M. 690
STEVENS, H. 1669 1670
STEVENS, J. A. 328 2077 2094
STEVENS, J. R. 433
STEWART, G. T. 1367
STEWART, P. N. 2403
STINSON, E. E. 376
STODOLA, F. H. 253 256 257
STOKIE, G. 1045
STOLIAROFF, M. 1958
STOLOFF, L. 2494
STONE, A. L. 880
STORELLI, C. 2095
STOUDT, T. H. 2305 2306
STOUFFER, J. E. 1450
STOUT, E. I. 1118
STOWELL, E. C. 2345
STRATTON, F. 2238
STREAMER, M. 333 334
STRICKER, H. 208
STRINGER, C. S. 233 249 274
STROEMBERG, R. 917
STROER, W. F. H. 2189
STRYKER, V. H. 1138
STUCKI, J. C. 1941
SU, M. S. 1925
SUELLMANN, H. 1033
SUEMASU, K. 1434 1435
SUGAWARA, S. 726
SUGG, J. Y. 148 1041 1042 1043 1679 1690 1706 1730 1731 1732 1738 1739
SUGISAWA, H. 707
SUGIURA, M. 336 337 338 339 340 357
SUGIYAMA, H. 678
SUNDSTROM, B. 2263
SUTCLIFFE, D. 1003
SUTHERLAND, D. N. 2404 2405
SUTHERLAND, G. K. 2406
SUZUKI, H. 184 258 526 599 600 1740
SUZUKI, K. 2420
SUZUKI, M. 1097
SUZUKI, Y. 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 275 691
SVEC, F. J. 1015
SVENSSON, S. 514 559 565 685 1113 1145 1173 1728 1794 1863
SWAMINATHAN, N. 2096 2097
SWANSON, J. W. 2470
SWANSON, M. A. 366 794 1494
SWEDIN, B. 1608 1992

SWENSON, M. J. 1268
SWIFT, G. 579
SWINEFORD, O., JR. 1699 1795
SWINGLE, W. W. 1942 1943
SYMES, E. L. 2433
SZAFRANOWA, H. 1034
SZCZESNIAK, A. S. 881
SZETLI, J. 795

TACHIBANA, T. 882
TAEUFEL, K. 2022 2098
TAKAHASHI, K. 636
TAKAHASHI, M. 727
TAKAHASHI, N. 1323
TAKAHASHI, T. 1665 1823
TAKANO, M. 478
TAKEMOTO, K. K. 1424 1436 1437 1438
TAKEMOTO, T. 1402
TAKEZAWA, J. 1097
TAMAOKI, T. 1398 1404
TAMHANE, D. V. 294
TANABE, O. 599 600
TANENBAUM, S. W. 1749
TANIGUCHI, H. 232
TANOURA, N. 1316
TANTAOUI, M. 1047 2407
TANZER, J. M. 2255 2256 2334 2349 2359
TARAVEL, F. R. 2506
TARR, H. L. A. 100 138
TARROW, A. B. 1714 1773
TARTARINI, S. 1509 1510
TAUBMAN, M. A. 2330
TAURASO, N. M. 1223
TAYLOR, G. C. 2408
TAYLOR, J. H. 1270
TAYLOR, N. W. 883 884
TAYLOR, P. M. 601 602 715
TEAGUE, H. J. 2396
TEICHMANN, B. 603 692 693 694 695 1681
TELENIUS, U. 2066
TEPPER, S. A. 1360
TERRY, R. 1993
TESCHNER, F. 2409
TEXTER, J. A. 885
THANGAMANI, A. 288
THEANDER, O. 594
THEOBALD, R. S. 1373
THIELECKE, K. 1046
THOMAS, L. 1383 1384
THOMPSON, A. 622 624 638 639 697 708
THOMPSON, C. F. 227
THOMPSON, C. R. 1941
THOMPSON, T. E. 1341 1405
THOMSEN, A. E. T. 2137
THOMSON, D. 2055
THORLING, E. B. 1208
THORNE, H. V. 1227 1228
THORSEN, H. G. R. 1018 1610 1611 2139 2140 2200 2233
TIBBLING, P. 1312
TIHLARIK, K. 1130
TILBURY, R. H. 95 2385 2410 2513

TILLES, J. G. 1224
TILLEY, C. J. 1398
TIMBERLAKE, C. E. 639
TIMSIT, J. 1944
TINCH, R. J. 1566
TIPPER, D. J. 1845
TIPTON, C. L. 740
TISELIUS, A. 101 979 1084
TITTSLER, R. P. 102
TLACH, K-F. 479
TOBIN, R. 493 908 909
TODOROVITCH, K. 1028
TOHIRA, Y. 1316
TOLLERZ, G. 1269
TOLMACHEV, V. N. 2026
TOLSTIKOV, V. P. 62
TOLSTOGUZOV, V. B. 886 1513
TOMIMATSU, Y. 788 887 1000 1001 1002
TONOMURA, K. 599 600
TOON, P. 760
TOOPS, E. E., JR. 469
TOOROP, H. A. 963
TORII, M. 305 568 574 580 604 757 1796
1797 2514
TORIYAMA, K. 301
TORRACA, G. 811
TORRES, H. N. 2027
TOSA, T. 1479 1483
TOSI, R. 2035
TOTH, M. 457 458
TOWLE, G. A. 1179
TOWNLEY, R. R. W. 2032
TOYER, W. G., JR. 2092
TREIBLER, E. 888 889
TRESSELT, D. 441
TRIMNELL, D. 1174
TROELL, L. 1994
TROTT, G. F. 1411 1412 1561
TROY, V. G. 70
TRPINAC, P. 572
TRYON, P. F. 427
TSANG, Y. 1341
TSEKOVA, R. 1248
TSITSISHVILI, V. G. 967
TSUCHIYA, H. M. 156 159 160 172 173 174 198
233 249 274 306 377 401 775
TSUJI, H. 291 320
TSUKANO, Y. 558 787 836
TSURU, D. 291 307 319 358
TU, C. C. 1048
TUBIS, M. 1175
TUCHWEBER, B. 1250 1940
TUNG, K. K. 743
TUNG, R. 1090
TUPASI, T. 1207
TURINI, P. 791 822 1555
TURINO, G. M. 1773
TURNER, P. A. 1995
TURRIZIANI, R. 811
TURVEY, J. R. 605
TUZIMURA, K. 677 678
TWIGG, G. D. 1373
TYREE, J. T. 623

UCHIDA, K. 262 264 265 266 267 268 270 271 272 273 275
UCHIYAMA, H. 103
UGHIDA, T. 703
ULFENDAHL, H. R. 1013
ULLBERG, S. 1975
USAKOV, N. S. 1135
USHAKOV, S. N. 1136
USHAKOVA, N. A. 2028
USOV, A. I. 1342
USUI, T. 527 528 678
USZMI, S. 972
UYEKI, E. M. 1945
UZMAN, L. L. 1497 2104

VAELI, L. 1902
VAHERI, A. 1209 1215 1225 1439
VALAKHANOVICH, A. I. 104 921
VALTASAARI, L. 990
VAN CLEVE, J. W. 505 581 582 665
VAN DEMARK, P. J. 9
VAN DEN HEUVEL-HEYMANS, G. 2141
VAN DER BIJL, P. 961
VAN DER HYDEN, I. 1096
VAN HOUTE, J. 2248
VAN LEUVEN, D. B. 1381
VAN OENE, H. 890
VAN OSS, C. J. 964 965 1754
VAN RIJSSEL, T. G. 1485 1962
VAN TIEGHEM, PH. 105 106
VAN WEZEL, A. L. 1226
VAN WINKLE, Q. 124 399 973
VANDERSALL, J. H. 1256
VANNGARD, T. 834 835
VARA, P. 2239
VARCO, R. L. 1571 2226
VASKO, P. D. 891
VASSEUR, A. 107 2411
VASSEUR, E. 518 1007
VAVRA, A. 108
VAVRA, I. 108
VEGARUD, G. 1453 1471 1472
VEGNENTE, A. 2038
VELDHUIS, M. K. 88
VENKATARAMAN, R. 656
VERCELLONE, A. 1120
VESSEY, I. 941
VICARI, G. 1173 1683 1685 1863
VICKERY, A. L. 1996
VIGEVANI, A. 809
VIGH, A. 2415
VIGIER, P. 1440
VIGNON, M. R. 2506
VILLANUEVA, E. R. 2421
VINK, H. 991 992
VINOGRADOVA, K. A. 308
VIRNIK, A. D. 1112 1134 1135 1136 1137 1140 1143 1144 1164 1171 1183 1192 1287 2495
VITELLO, L. 887
VITKOVSKAYA, L. A. 104
VLIEGENTHART, J. F. G. 672 674

VOCK, C. 2041
VOEGELI, H. 2095
VOELKER, R. 2029
VOET, R. L. 1352
VOGT, W. 1420 1421 1441
VOHRA, P. 2030
VOISIN, M. C. 1246
VOJNOVICH, C. 417
VON HOFSTEN, B. 1073
VON KORFF, R. 1384
VOORHEES, A. B. 1946
VOROBEI, A. I. 2142
VOSS, H. 1442
VUKOV, K. 2412 2413 2414 2415

WADA, H. 2316
WAELE, A. D. 2471
WAGNER, A. 699
WAGNER, B. 1419 1441
WAGNER, G. H. 2461
WAKSMUNDZKI, A. 480
WALES, M. 481 892 1556
WALKER, E. A. 1270
WALKER, G. J. 359 378 379 380 381 593 606 2302 2303 2511 2515 2516 2517
WALKER, L. 1237
WALL, F. T. 993
WALL, L. A. 821
WALL, R. A. 1198
WALLACE, G. L. 1931
WALLACE, R. A. 1176
WALLENFELS, K. 360
WALLENIUS, G. 1035 1036 1105 1702 2170 2171 2172
WALLERSTEIN, R. O. 1271 1272
WALSETH, T. F. 231
WALTER, H. 1085 1086 1087 1088 1089 1090 1091 1092 1093
WALTON, C. F., JR. 2416
WALTON, K. W. 1321 1324 1362 1368 1377 1378 1380 1381 1385 1386 1406 1407 1408 1409 1410 1445 2496
WALTON, R. P. 1947
WAN, P. J. 482
WARBY, C. 1563
WARD, H. M. 109
WARD, P. F. V. 1397
WARD, R. B. 179
WARD, R. J. 2240
WARDEN, D. 1227 1228
WARDLAW, A. C. 1557
WARNER, I. 2374
WARREN, J. 1715
WASCHEWSKY, H. J. 1036
WASSELL, A. R. 1015
WASSERMAN, K. 2168 2173 2174 2175
WATANABE, H. 738 755
WATANABE, K. 1435
WATANABE, T. 761 762
WATSON, P. R. 428 429 895 1181
WEAKLEY, F. B. 617 686
WEBBER, J. M. 742

WEBER, G. R. 2417
WEBLEY, D. M. 122 123
WEIBULL, B. 234
WEIDENHAGEN, R. 728 729
WEIGEL, H. 243 244 245 246 342 343 346 347 351 529 530 531 539 540 577 586 587 588 589 590 649 650 681 682 1324 1796
WEIGERT, M. G. 1801 1804 1805 1806 1807 1832 1834 1835
WEIL, R. M. 214
WEISER, H. H. 124
WEISSBERG, S. G. 481 892 932 933 942 943 944 945 946 1556
WELLS, J. D. 1343
WERNER, G. 2131
WEST, A. 2510
WEST, A. C., III 1005
WEST, G. B. 1896 1921 1935 1948
WESTPHAL, O. 603 692 693 694 1470 1676 1681
WETMUR, J. G. 1558
WHELAN, W. J. 235 362 550 583 601 602 605 607 626 659 664 712 715 751
WHIFFEN, D. H. 670 800 801 893
WHISTLER, R. L. 667 1177 1178 1179 1325 2484
WHITE, C. A. 833
WHITE, J. C. 74 2257
WHITE, J. W., JR. 612 679
WHITE, R. R. 1993
WHITE, W. H. 2241
WHITESIDE-CARLSON, V. 18 19 20 110 111 112 113 114 140 309
WHYTE, J. N. C. 680
WICKEN, A. J. 1788
WICKERHAM, L. J. 38 43
WIEDERSCHEIM, M. 978
WIELAND, H. 1366
WIEMAN, R. L. 469
WIGGINS, L. F. 2418
WIGHT, N. J. 521
WIKSTROEM, K. 1974
WIKSTROEM, R. 1710 1712
WILANDER, O. 2200
WILDY, P. 1612
WILEY, C. E. 1391
WILHAM, C. A. 130 306 510 584 596 661 773 774 775 832 894 1126 1127 1559
WILHELMI, A. E. 2000 2031
WILKIE, K. C. B. 497 554
WILKINSON, A. W. 1716
WILKINSON, J. F. 2238
WILKINSON, S. 1173 1863
WILL, D. H. 1268
WILLCOX, M. L. 1011
WILLENBERG, W. 2419 2497
WILLIAMS, J. W. 483
WILLIGHAGEN, R. G. J. 1485 1486 1488 1490 1495
WILSON, D. V. 1469 1482
WILSON, J. S. 2242
WIMER, E. 2188
WINTER, J. H. 903
WINTER, S. S. 1198 1199 1200
WINZOR, D. J. 442

WIRMER, V. 1009 1010
WIRNER, H. 2498
WISE, C. S. 597 660 1008
WISTAR, R., JR. 2501
WITT, E. E. 2460
WITT, G. 2033
WOHLFARTH, E. 1247
WOJCIESZAK, P. 129
WOJNAROWSKA, M. 1326
WOLDRAM, C. G. 2168
WOLF, A. M. 791
WOLFE, M. 2147
WOLFF, I. A. 428 429 430 431 504 895 1180 1181
WOLFROM, M. L. 622 623 624 637 638 639 668 684 696 697 708 709 710 711 1182 1239
WOLMAN, B. 1872 1884 2143
WOLMAN, M. 2143 2144
WOOD, J. M. 2258 2264 2296 2333 2360 2361
WOOD, J. W. 1229
WOOD, W. I. 2255
WOODS, E. F. 468 856
WOODSIDE, E. E. 1411 1412 1504 1560 1561 1626
WRIGHT, D. E. 115
WUENSCHE, L. 144 175
WUNDERLY, C. 1613
WURZ, L. 1851
WYKES, J. R. 1467 1473

YAKULIS, V. 1803
YAMAGUCHI, S. 930
YAMAGUCHI, T. 310 337 1369
YAMAMOTO, M. 1443
YAMAMOTO, T. 185
YAMANE, T. 2420
YAMANOUCHI, F. 713
YAMAOKA, N. 527 528 677 678
YAMASHIRO, K. M. 2044
YAMAUCHI, A. 1330 1344
YAMAUCHI, F. 236 276 585 641 642 744 763
YANG, J. T. 896
YANG, Y. 1636
YANO, K. 301
YASUOKA, S. 1369
YEAGER, G. H. 2204
YENKO, F. M. 6
YOKOHARI, R. 1847
YOKOYAMA, M. 528
YONKOVICH, S. J. 1834
YOSHIKAWA, Y. 636
YOUD, F. R. 778
YOUNG, A. A. 912 1581
YOUNG, D. G. 1176
YOUNG, N. M. 1665 1824 1836
YOUNT, W. J. 1798 2505
YU, K. 330
YUILE, C. L. 1993
YUKAWA, S. 133

ZABLOW, E. 2154
ZAGORSKI, K. 480
ZAIDI, S. 47
ZAJIC, J. E. 330
ZAKRZEWSKI, K. 432 466 796 994 995 996 1037 1326
ZARETSKAYA, R. V. 104
ZARNITZ, M. L. 1793
ZAVADA, O. A. 1183
ZAWADA, E. 931 985
ZEBEC, M. 484 485 947
ZEDERFELDT, B. 2218
ZEIDLER, H. 440 486
ZEITLER, H-J. 1313
ZEN, S. 703
ZEVENHUIZEN, L. P. T. M. 311
ZHBANKOV, R. G. 897 948 1193
ZIEF, M. 433 434
ZILVERSMIT, D. B. 1364 1365
ZIMBALATTI, F. 2086
ZINGSHEIM, V. H. P. 862
ZINSSER, H. H. 997
ZITKO, V. 1184
ZITO, R. 391
ZOAR, B. 1702
ZOBEL, H. F. 883
ZOLOTOKRYLINA, E. S. 2243
ZOPF, W. 60
ZORINA, O. M. 949
ZOZAYA, J. 1700 1741
ZSIGA, J. 1709
ZUBERI, R. 47
ZURAKOWSKA-ORSZAGH, J. 931 985
ZUSCHEK, F. 1273
ZWEIFEL, G. 781

BIBLIOGRAPHY OF PATENTS

Order of Arrangement and Definitions

The primary arrangement of patents within each section and subsection is alphabetical according to the name of the first patentee; the secondary order is chronological. Patents are numbered consecutively throughout.

The name of the patent assignee appears in brackets after the name of the patentee(s). Because of the length of the name of two assignees and the frequency of occurrence, symbols are used as follows:

[Assignee A] Designates the United States of America as represented by the Secretary of Agriculture.

[Assignee B] Designates the Commonwealth Engineering Company of Ohio.

Titles of all foreign patents have been translated into English. The original language in which the patent was issued is evident from the name of the country that precedes the patent number.

The date usually given is when the final patent was granted. Exceptions are as follows:

Applications (Appln.)—A few application numbers are included for Belgium, Denmark, Germany, Netherlands, New Zealand, and Sweden. The date of publication is given. For Austria, "A" is prefixed to the application number.

Specifications (Spec.)—For South Africa, some specifications are included with the date of acceptance.

Publications—In several countries, allowed applications have been issued in printed form for public inspection pending final action; the date is that of printing. The details of these procedures have changed with time; only definitions applicable to the time covered in this bibliography (1940-75) are included here. For Germany, from January 1, 1957, until October 1, 1968, these printed forms were designated Deutsche Auslegeschrift (DAS); thenceforth, they have been designated Offenlegungsschrift (Offen.). Such printed forms are designed Délivré par Arrêté (DPA) in France, Teljes in Hungary, and Kokai in Japan.

Supplementary reference to Chemical Abstracts, Microbiology Abstracts, or Staerke are cited for three groups of patents, that is: those from countries where languages less generally understood are used (Czechoslovakia, Hungary, Japan, Poland, and USSR); those drawn from Chemical Abstracts that have not been verified in the original; and those for which the abstracts are unusually informative.

Patents not examined in either the original or in Chemical Abstracts are marked by an asterisk. All other patents have been examined in the original.

Cross-references are listed at the end of each section.

Classification and Subject Content of Sections

XXVII. Production of native dextrans in growing cultures

(1) AMERICAN SUGAR REFINING CO. PRODUCTION AND FRACTIONATION OF DEXTRANS. BRITAIN 716,660. OCT. 13, 1954.

(2) BEHRENS, U., AND M. RINGPFEIL. [VEB SERUM-WERK BERNBURG]. BIOLOGICAL SYNTHESIS OF POLYSACCHARIDES, ESPECIALLY DEXTRANS. GERMANY 1,083,020. JUNE 9, 1960. (CHEM. ABSTR. 1961. 55:15827D.)

(3) ------, A. GABERT, AND M. RINGPFEIL. PROCESS FOR SEPARATING POLYSACCHARIDES AND THEIR DERIVATIVES FROM SOLUTIONS. EAST GERMANY 34,912. JAN. 15, 1965.

(4) ------, A. GABERT, AND M. RINGPFEIL. [DEUTSCHE AKADEMIE DER WISSENSCHAFTEN ZU BERLIN]. PROCESS FOR THE SEPARATION OF DEXTRAN AND CARBOXYMETHYL DEXTRAN FROM SOLUTIONS. GERMANY (DAS) 1,203,700. OCT. 21, 1965.

(5) ------, A. GABERT, AND M. RINGPFEIL. PROCESS FOR SYNTHESIS OF DEXTRAN FROM SUGAR BYPRODUCTS. EAST GERMANY 58,573. NOV. 5, 1967. (MICROBIOL. ABSTR. 1968. SEC. A, 4(2):A455.)

(6) ------, M. RINGPFEIL, A. GABERT, AND OTHERS. MICROBIAL PRODUCTION OF DEXTRAN. EAST GERMANY 62,647. JULY 5, 1968. (CHEM. ABSTR. 1969. 71:20949K.)

(7) ------, G. BUETTNER, A. GABERT, AND B. HEYNE. DEPOLYMERIZATION INHIBITORS FOR TECHNICAL DEXTRAN SOLUTION. EAST GERMANY 68,495. AUG. 20, 1969. (CHEM. ABSTR. 1970. 72:68461T.)

(8) BENDA, A., M. BUCKO, J. DASEK, AND OTHERS. MANUFACTURING BIOSYNTHETIC PREPARATIONS (BY AEROBIC FERMENTATION). CZECHOSLOVAKIA 124,390. SEPT. 15, 1967. (CHEM. ABSTR. 1968. 69:1798C.)

(9) COMMONWEALTH ENGINEERING CO. OF OHIO. PROCESS PERMITTING ISOLATION OF DEXTRAN PRACTICALLY FREE OF FERMENTATION NUTRIENTS. BELGIUM 554,923. MAY 31, 1957.

(10) DOW CHEMICAL CO. SEPARATION OF DEXTRAN FROM FRUCTOSE USING ION EXCHANGE RESINS. BELGIUM 661,918. OCT. 1, 1965.*

(11) EAST ANGLIA CHEMICAL CO., LTD., A. R. LOCKWOOD, AND G. SWIFT. IMPROVEMENTS IN AND RELATING TO THE PRODUCTION OF DEXTRAN. BRITAIN 634,129. MAY 28, 1948.

(12) ------. IMPROVEMENTS IN AND RELATING TO THE PRODUCTION OF DEXTRAN. SOUTH AFRICA (SPEC.) 1963/48. ACCEPTED FEB. 10, 1949.

(13) HAWORTH, W. N., AND M. STACEY. IMPROVEMENTS IN AND RELATING TO THE PRODUCTION OF DEXTRAN FROM SUCROSE BY MEANS OF DEXTRAN-FORMING BACTERIA. BRITAIN 618,999. MARCH 2, 1949.

(14) HEHRE, E. J., H. M. TSUCHIYA, N. N. HELLMAN, AND F. R. SENTI. [ASSIGNEE A]. PRODUCTION OF DEXTRAN. U.S. 2,906,669. SEPT. 29, 1959.

(15) JAMES, A. E. [DEXTRAN LTD.] PRODUCTION OF DEXTRAN. CANADA 520,284. JAN. 3, 1956.

(16) JIRICEK, V. DEXTRAN PRODUCTION BY LEUCONOSTOC FERMENTATION. CZECHOSLOVAKIA 124,853. OCT. 15, 1967. (CHEM. ABSTR. 1968. 69:34684R.)

(17) KOOI, E. R. [CORN PRODUCTS REFINING CO.]. PROCESS FOR PRODUCING DEXTRAN. U.S. 2,689,816. SEPT. 21, 1954.

(18) LIPPS, B. J., JR. [ESSO PRODUCTION RESEARCH CO.]. FERMENTATION PROCESS FOR PREPARING POLYSACCHARIDES. U.S. 3,251,749. MAY 17, 1966.

(19) ------, [ESSO PRODUCTION RESEARCH CO.]. FERMENTATION PROCESS FOR PRODUCING A HETEROPOLYSACCHARIDE. U.S. 3,281,329. OCT. 25, 1966.

(20) MALEK, J., AND L. LACKO. DEXTRAN. CZECHOSLOVAKIA 96,077. JULY 15, 1960. (CHEM. ABSTR. 1963. 58:7338C.)

(21) ------ AND L. LACKO. RECOVERY OF DEXTRAN. CZECHOSLOVAKIA 96,416. AUG. 15, 1960. (CHEM. ABSTR. 1963. 58:7338E.)

(22) MIODUSZEWSKI, J. Z., M. H. MIODUSZEWSKA, AND A. KORNACKI. [INSTYTUT PRESEMYSLU FARMACEUTYCZNEGO]. SEPARATION OF D-FRUCTOSE FROM WASTE SOLUTIONS OF HIGH-MOLECULAR-WEIGHT DEXTRAN PRODUCTION. POLAND 70,454. MAY 30, 1974. (CHEM. ABSTR. 1975. 82:60392G.)

(23) MISAKI, A., M. ISONO, AND S. YUKAWA. [TAKEDA CHEMICAL INDUSTRIES, LTD.]. FERMENTATIVE PREPARATION OF LOW-MOLECULAR-WEIGHT DEXTRAN. JAPAN 70 26,716. SEPT. 2, 1970. (CHEM. ABSTR. 1971. 74:2694F.)

(24) NOVAK, L. J., AND G. S. STOYCOS. [ASSIGNEE B]. METHOD FOR ISOLATING SUBSTANTIALLY FREE DEXTRAN FROM FERMENTATES COMPRISING THE SAME. U.S. 2,798,065. JULY 2, 1957.

(25) ------ AND G. S. STOYCOS. [ASSIGNEE B]. METHOD OF ISOLATING SUBSTANTIALLY FREE DEXTRAN FROM FOOD FERMENTATE. CANADA 579,193. JULY 7, 1959.

(26) OEPPINGER, H., AND A. OPPERMANN. [FARBWERKE HOECHST AKT.-GES.]. PROCESS FOR PREPARATION OF DEXTRAN. GERMANY 1,003,397. APRIL 2, 1959.

(27) OWEN, W. L., JR., AND W. L. OWEN. PRODUCTION OF GUM DEXTRAN. U.S. 2,392,258. JAN. 1, 1946.

(28) SARGENT, R. N. [THE DOW CHEMICAL CO.]. SEPARATION OF DEXTRAN FROM FRUCTOSE USING ION EXCHANGE RESINS. U.S. 3,184,334. MAY 18, 1965.

(29) STAHLY, G. L. [ASSIGNEE B]. METHOD OF MAKING DEXTRAN. U.S. 2,310,263. FEB. 9, 1943.

(30) STOYCOS, G. S., AND L. J. NOVAK. [ASSIGNEE B]. METHOD OF ISOLATING SUBSTANTIALLY PURE DEXTRAN FROM FERMENTATION PRODUCTS AND THE DEGRADATION THEREOF. BRITAIN 800,288. AUG. 20, 1958.

(31) VANECEK, R. A METHOD OF PRODUCING MANNITE. CZECHOSLOVAKIA 102,742. FEB. 15, 1962.*

(32) WERTHER, H., H. D. WERTHER, P. MULLER, AND OTHERS. PROCESS AND DEVICE FOR PRECIPITATING FERMENTATION PRODUCTS, IN PARTICULAR DEXTRAN, FROM A FERMENTATION SOLUTION. EAST GERMANY 31,904. MARCH 5, 1965.*

(33) WIMMER, E. L. [AMERICAN SUGAR REFINING CO.]. FRACTIONATION OF DEXTRANS WITH ALKALINE EARTH HYDROXIDES. U.S. 2,685,579. AUG. 3, 1954.

(34) ------. [AMERICAN SUGAR REFINING CO.]. ISOLATION OF DEXTRAN BY ALKALINE EARTH HYDROXIDE COMPLEX FORMATION AND PRODUCTS THEREOF. U.S. 2,686,777. AUG. 17, 1954.

(35) ------ AND G. D. LAKATA. [AMERICAN SUGAR REFINING CO.]. DEXTRAN PRODUCTION. U.S. 2,775,540. DEC. 25, 1956.

(36) ------. [AMERICAN SUGAR REFINING CO.]. PROCESS FOR PURIFYING AND FRACTIONATING DEXTRAN. GERMANY 966,852. SEPT. 12, 1957.

(37) YAMANAKA, S. [CHIYODA CHEMICAL INDUSTRY CO.]. A METHOD FOR THE PREPARATION OF DEXTRAN. JAPAN 17,397/61. SEPT. 26, 1961. (CHEM. ABSTR. 1962. 56:14745D.)

OTHER PATENTS: 48 454 822 850

XXVIII. Enzymatic synthesis of native and clinical sized dextrans

(38) BEHRENS, U. CLINICAL DEXTRAN. U.S.S.R. 121,908. OCT. 16, 1959.*

(39) ------ AND M. RINGPFEIL. [VEB SERUM-WERK BERNBURG]. PROCESS FOR THE PRODUCTION OF LOW MOLECULAR DEXTRAN, IN PARTICULAR OF STARTER FOR CONTROLLED SYNTHESIS. GERMANY (DAS) 1,083,021. JUNE 9, 1960.

(40) ------ AND M. RINGPFEIL. [VEB SERUM-WERK BERNBURG]. PROCESS FOR ENZYMATIC SYNTHESIS OF DEXTRAN. U.S. 3,044,940. JULY 17, 1962.

(41) GILKISON, J. S., AND E. R. KOOI. [CORN PRODUCTS REFINING CO.]. RECOVERY AND PURIFICATION OF ENZYMES. U.S. 2,810,677. OCT. 22, 1957.

(42) HELLMAN, N. N., H. M. TSUCHIYA, S. P. ROGOVIN, AND OTHERS. [ASSIGNEE A]. CONTROLLED ENZYMATIC SYNTHESIS OF DEXTRAN. U.S. 2,726,985. DEC. 13, 1955.

(43) KOEPSELL, H. J., R. W. JACKSON, AND C. A. HOFFMAN. [ASSIGNEE A]. PRODUCTION OF FRUCTOSE. U.S. 2,729,587. JAN. 3, 1956.

(44) ------, A. KAZENKO, A. JEANES, AND OTHERS. [ASSIGNEE A]. PREPARATION AND USE OF POLYSACCHARIDE-PRODUCING ENZYME. U.S. 2,673,828. MARCH 30, 1954.

(45) KOOI, E. R. [CORN PRODUCTS REFINING CO.]. PROCESS OF PRODUCING DEXTRAN. U.S. 2,801,204. JULY 30, 1957.

(46) ------. [CORN PRODUCTS REFINING CO.]. PROCESS OF PRODUCING DEXTRAN. U.S. 2,801,205. JULY 30, 1957.

(47) ------. [CORN PRODUCTS REFINING CO.]. PRODUCTION OF DEXTRAN-DEXTRINASE. U.S. 2,833,695. MAY 6, 1958.

(48) NEELY, W. B. [DOW CHEMICAL CO.]. CONTROL OF CALCIUM TO INCREASE DEXTRANSUCRASE. U.S. 2,961,379. NOV. 22, 1960.

(49) PATAT, F. [FARBWERKE HOECHST AKT.-GES.]. PROCESS FOR MANUFACTURING NATIVE DEXTRAN. GERMANY 1,089,711. MARCH 30, 1961.

(50) SHURTER, R. A. [COMMERCIAL SOLVENTS CORP.]. CONTINUOUS DIALYSIS PROCESS FOR PRODUCTION OF CLINICAL DEXTRAN. U.S. 2,717,853. SEPT. 13, 1955.

(51) SJOESTROEM, C. G. E. [SVENSKA SOCKERFABRIKS AKTIEBOLAGET]. PROCESS FOR THE ENZYMATIC PRODUCTION OF DEXTRAN FROM SACCHAROSE. CANADA 531,909. OCT. 16, 1956.

(52) ------. [SVENSKA SOCKERFABRIKS AKTIEBOLAGET]. CRUDE DEXTRAN FOR PHARMACEUTICALS FROM SUCROSE. SWEDEN 157,635. JAN. 29, 1957. (CHEM. ABSTR. 1958. 52:6661.)

(53) ------. PROCESS FOR OBTAINING DEXTRANSUCRASE. GERMANY 1,083,984. DEC. 15, 1960.

(54) STOYCOS, G. S. [ASSIGNEE B]. BUFFERING OF DEXTRAN FERMENTATIONS. U.S. 2,694,670. NOV. 16, 1954.

(55) ------. [ASSIGNEE B]. BUFFERING OF DEXTRAN FERMENTATIONS. CANADA 536,756. FEB. 5, 1957.

(56) SVENSKA SOCKERFABRIKS AKTIEBOLAGET. ENZYMATIC PROCESS FOR PRODUCING DEXTRANE FROM SACCHAROSE. BELGIUM 517,343. FEB. 2, 1953.

(57) ------. A PROCESS FOR THE ENZYMATIC PRODUCTION OF DEXTRAN FROM SACCHAROSE. SOUTH AFRICA (SPEC.) 371/53. ACCEPTED APRIL 4, 1953.

(58) ------. ENZYMATIC PRODUCTION OF DEXTRAN FROM SACCHAROSE. BRITAIN 734,369. JULY 27, 1955.

(59) ------. PROCESS IN THE ENZYMATIC PREPARATION OF DEXTRAN. DENMARK 92,957. MARCH 12, 1962.

(60) TSUCHIYA, H. M., AND H. J. KOEPSELL. [ASSIGNEE A]. PRODUCTION OF DEXTRANSUCRASE. U.S. 2,686,147. AUG. 10, 1954.

(61) ------, N. N. HELLMAN, AND H. J. KOEPSELL. [ASSIGNEE A]. SYNTHESIS OF DEXTRAN AND DEXTRAN ANALOGS OF PREDETERMINED MOLECULAR WEIGHT. U.S. 2,724,679. NOV. 22, 1955.

OTHER PATENTS: 165 209 210 923

XXIX. Enzymatic degradation

A. Sources and Production of Dextranases

(62) ABE, J., T. WATANABE, T. YAMAGUCHI, AND S. GOCHO. ALKALINE DEXTRANASE ENZYME. GERMAN (OFFEN.) 2,107,461. SEPT. 2, 1971. (CHEM. ABSTR. 1971. 75:139434M.

(63) ------, T. WATANABE, T. YAMAGUCHI, AND S. GOCHO. [TOYO JOZO KABUSHIKI]. PROCESS FOR PRODUCTION OF ENZYME ALKALINE DEXTRANASE. U.S. 3,737,383. JUNE 5, 1973.

(64) ARIMA, K., T. BEPPU, M. YOKOYAMA, AND OTHERS. [KOJIN LTD.]. FERMENTATIVE MANUFACTURE OF DEXTRANASE. JAPAN 72 34,148. AUG. 29, 1972. (CHEM. ABSTR. 1972. 77:138352N.)

(65) ------, T. BEPPU, M. YOKOYAMA, AND OTHERS. [KOJIN LTD.]. FERMENTATIVE MANUFACTURE OF DEXTRANASE. JAPAN 72 34,150. AUG. 29, 1972. (CHEM. ABSTR. 1972. 77:150597D.)

(66) BROWN, R. G. DEXTRANASE FROM MICROORGANISMS FOR USE IN THE HYDROLYSIS OF DEXTRAN. GERMANY (OFFEN.) 2,001,618. OCT. 8, 1970. (CHEM. ABSTR. 1971. 74:30759Z.)

(67) ------. MICROBIAL PRODUCTION OF DEXTRANASE. FRANCE 2,037,925. FEB. 5, 1971. (MICROBIOL. ABSTR. 1971. SEC. A, 6(9):A7924.)

(68) ------. DEXTRAN HYDROLYZING ENZYMES. U.S. 3,699,002. OCT. 17, 1972.

(69) CARLSON, W. W., AND V. WHITESIDE-CARLSON. [ASSIGNEE B.] PROCESS FOR OBTAINING DEXTRANASE. GERMANY 1,033,167. DEC. 18, 1958.

(70) CARLSON, V. W., AND W. W. CARLSON. [ASSIGNEE B]. METHOD OF PRODUCING A DEXTRAN SPLITTING ENZYME. CANADA 581,950. AUG. 25, 1959.

(71) CHAIET, L. [MERCK AND CO., INC.]. DEXTRANASE FROM PENICILLIUM FUNICULOSUM. GERMANY (OFFEN.) 1,952,977 MAY 21, 1970. (CHEM. ABSTR. 1970. 73:339120.)

(72) ------ AND A. J. KEMPF. [MERCK AND CO., INC.]. PURIFICATION OF DEXTRANASE WITH AQUEOUS FERRIC CHLORIDE SOLUTIONS. GERMANY (OFFEN.) 1,955,956. MAY 21, 1970. (CHEM. ABSTR. 1970. 73:31924R.)

(73) COMMONWEALTH ENGINEERING CO. OF OHIO. PRODUCTION OF DEXTRAN-SPLITTING ENZYME BY THE CULTIVATION OF ASPERGILLUS WENTII. BRITAIN 767,671. FEB. 6, 1957.

(74) ------. A PROCESS FOR THE PREPARATION OF A LIMIT DEXTRANASE. NETHERLANDS (APPLN.) 170,353. SEPT. 15, 1958.*

(75) CRESCENZI, G. S., P. ZAFFARONI, AND E. GHISELLI. [PIERREL S.P.A.]. POLYSACCHARIDE-HYDROLYZING ENZYMES. BRITAIN 1,285,798. AUG. 16, 1972. (CHEM. ABSTR. 1972. 77:124797Z.)

(76) DAVIS, R. S., AND D. L. ISENBERG. [BECKMAN INSTRUMENTS, INC.]. DEXTRANASE PRODUCTION BY BACTERIA. U.S. 3,787,289. JAN. 22, 1974.

(77) EMEIS, C. C., AND D. BONSE. [VERSUCHS- UND LEHRANSTALT FUER SPIRITUSFABRIKATION 161 VERSUCHS- UND LEHRENSTALLT FUER BRAUEREI IN BERLIN]. DEXTRANASES AND STARCH-HYDROLYZING ENZYMES FROM LIPOMYCES. GERMANY (OFFEN.) 1,908,225. AUG. 20, 1970. (CHEM. ABSTR. 1970. 73:108265M.)

(78) ERDEI, J., K. POLYA, J. HARCSA, AND OTHERS. [BIOGAL GYOGYSZERGYAR]. DEXTRANSE ENZYME. HUNGARIAN (TELJES) 5228. OCT. 28, 1972. (CHEM. ABSTR. 1973. 78:70217K.)

(79) GLASZIOU, K. T., C. R. SLACK. [COLONIAL SUGAR REFINING CO., LTD.]. DEXTRANASE FROM FUSARIUM FUSARIODES. SOUTH AFRICA 73 04,884. MAY 8, 1974. (CHEM. ABSTR. 1975. 82:137780S.)

(80) GUGGENHEIM, B., AND H. R. MUEHLEMANN. [SCHWEIZERISCHE FERMENT A.-G.]. MUTANASE BY FERMENTATION. GERMANY (OFFEN.) 2,152,620. APRIL 27, 1972. (CHEM. ABSTR. 1972. 77:18093G.)

(81) HULTIN, E., AND L. NORDSTROEM. WAY OF MAKING AN ENZYME THAT HAS ABILITY TO DEGRADE DEXTRAN POLYSACCHARIDE AND USE OF SUCH ENZYME TO MAKE SMALLER DEXTRAN MOLECULES. SWEDEN 133,157. OCT. 9, 1951.

(82) ISHIBASHI, K., T. OKANIWA, A. HATTORI, AND M. ARAI. [SANKYO CO., LTD.]. PROCESS FOR THE PRODUCTION OF A DEXTRAN-DEGRADING ENZYME. U.S. 3,702,805. NOV. 14, 1972.

(83) MENCIER, F., F. MANGENOT, AND P. FORLOT. [CHOAY S.A.]. GLUCAN-HYDROLASES. FRANCE (DEMANDE) 2,184,432. FEB. 1, 1974. (CHEM. ABSTR. 1974. 81:103259T.)

(84) MERCK AND CO., INC. TEETH-CLEANING COMPOSITIONS CONTAINING FUNGAL DEXTRANASE. NETHERLANDS 6,809,687. JAN. 30, 1969. (MICROBIOL. ABSTR. 1970. SEC. A, 5(5):A3073.)

(85) ------. PURIFICATION OF DEXTRANASE IN CRUDE FERMENTATION SOLUTION. FRANCE 2,022,487. SEPT. 18, 1970. (MICROBIOL. ABSTR. 1971. SEC. A, 6(5):A4300.)

(86) MOLODOVA, G. A., L. I. PETROVA, AND N. N. BURTSEVA. [ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF PROTEIN BIOSYNTHESIS]. DEXTRANASE. U.S.S.R. 459,497. FEB. 5, 1975. (CHEM. ABSTR. 1975. 83:26314U.)

(87) SANKYO CO., LTD. MICROBIAL SYNTHESIS OF DEXTRANASE. NETHERLANDS 6,914,830. APRIL 7, 1970. (MICROBIOL. ABSTR. 1970. SEC. A, 5(11):A7400.)

(88) SHIMADA, K., K. KOTERA, T. UEMURA, AND OTHERS. DEXTRANASE FROM FLAVOBACTERIUM SPECIES. GERMANY (OFFEN.) 2,319,242. OCT. 25, 1973. (CHEM. ABSTR. 1974. 80:13674Z.)

(89) SILAEV, A. B., K. A. VINOGRADOVA, G. V. CHERKESOVA, AND OTHERS. [ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF PROTEIN BIOSYNTHESIS]. DEXTRANASE. U.S.S.R. 446,543. JAN. 15, 1974. (CHEM. ABSTR. 1975. 82:123343Q.)

(90) ------, K. A. VINOGRADOVA, G. V. CHERKESOVA, AND OTHERS. [ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF PROTEIN BIOSYNTHESIS]. DEXTRANASE. U.S.S.R. 448,220. OCT. 30, 1974. (CHEM. ABSTR. 1975. 82:137781T.)

(91) SIPOS, T., AND F. W. VIEBROCK. [BAXTER LABORATORIES, INC.]. HIGH-STRENGTH DEXTRANASE AND PROCESS OF PREPARATION. U.S. 3,627,643. DEC. 14, 1971.

(92) TOYO JOZO KK. MICROBIAL PRODUCTION OF AN ALKALINE DEXTRANASE. NEW ZEALAND 162,814. MAY 10, 1972. (MICROBIOL. ABSTR. 1973. SEC. A, 8(5):8A3234.)

(93) TSUCHIYA, H. M., A. JEANES, H. M. BRICKER, AND C. A. WILHAM. [ASSIGNEE A]. PRODUCTION OF DEXTRANASE. U.S. 2,742,399. APRIL 17, 1956.

(94) VICCARO, J. P., AND J. M. WEAVER. METHOD OF PRODUCING DEXTRANASE. U.S. 3,663,371. MAY 16, 1972.

(95) WHITESIDE-CARLSON, V., AND W. W. CARLSON. [ASSIGNEE B]. PRODUCTION OF ENDO-DEXTRANASE BY ASPERGILLUS WENTII. U.S. 2,716,084. AUG. 23, 1955.

(96) ------ AND W. W. CARLSON. [ASSIGNEE B]. PRODUCTION OF ENDO-DEXTRANASE BY ASPERGILLUS WENTII. U.S. 2,716,237. AUG. 23, 1955.

(97) ------ AND W. W. CARLSON. [ASSIGNEE B]. PRODUCTION OF ENDO-DEXTRANASE BY ASPERGILLUS WENTII. CANADA 529,893. SEPT. 4, 1956.

(98) ------ AND W. W. CARLSON. [ASSIGNEE B]. PRODUCTION OF ENDO-DEXTRANASE BY AN ASPERGILLUS MOLD. BRITAIN 775,948. MAY 29, 1957.

(99) YOKIO, N., Y. HIBI, Y. NAKA, AND OTHERS. DEXTRANASE BY FERMENTATION WITH PENICILLIUM. [AMANO PHARMACEUTICAL CO., LTD.]. JAPAN (KOKAI) 73 87,080. NOV. 16, 1973. (CHEM. ABSTR. 1974. 80:106868F.)

(100) ------, Y. HIBI, Y. NAKA, AND OTHERS. DEXTRANASE PRODUCTION BY PENICILLIUM. JAPAN (KOKAI) 73 87,081. NOV. 16, 1973. (CHEM. ABSTR. 1974. 80:106869G.)

B. Use of Dextranases to Degrade Dextrans

(101) AKTIEBOLAGET PHARMACIA. PROCESS FOR PRODUCING DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTICAL PREPARATIONS. INDIA 42,252. FEB. 22, 1950.

(102) ------. PROCESS FOR MANUFACTURING DEXTRANE PRODUCTS FOR THE PREPARATION OF PHARMACEUTICAL AND THERAPEUTICAL PRODUCTS. ARGENTINA 75,248. MARCH 28, 1950.*

(103) ------. PROCESS FOR PRODUCING DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTICAL PREPARATIONS. BRITAIN 675,025. JULY 2, 1952.

(104) ------. PROCESS FOR PRODUCING DEXTRAN DEGRADATION PRODUCTS. DENMARK 77,987. AUG. 23, 1954.

(105) CARLSON, V. W., AND W. W. CARLSON. [ENZYMATIC CHEMICALS INC.]. METHOD OF PRODUCING DEXTRAN MATERIAL BY BACTERIOLOGICAL AND ENZYMATIC ACTION. U.S. 2,709,150. MAY 24, 1955.

(106) ------. [ASSIGNEE B]. PROCESS FOR PRODUCING DEXTRAN OF SUITABLE MOLECULAR WEIGHT. MEXICO 56,683. MAY 16, 1956.

(107) CARLSON, W. W., AND V. WHITESIDE-CARLSON. [ASSIGNEE B]. WAY OF MAKING DEXTRAN OF RELATIVELY LOW MOLECULAR WEIGHT FROM DEXTRAN OF RELATIVELY HIGH MOLECULAR WEIGHT BY USE OF DEXTRANASE. SWEDEN 177,853. JAN. 16, 1962.

(108) COMMONWEALTH ENGINEERING CO. OF OHIO. METHOD OF PRODUCING CARBOHYDRATE MATERIAL BY BACTERIOLOGICAL AND ENZYMATIC ACTION. SOUTH AFRICA (SPEC.) 959/52. ACCEPTED JULY 22, 1952.*

(109) ------. DEGRADATION OF DEXTRAN. BRITAIN 721,484. JAN. 5, 1955.

(110) ------. PROCESS OF PREPARING ENDO-DEXTRANASE AND DEXTRAN BY USE OF THIS ENDO-DEXTRANASE. FRANCE (DPA) 1,179,219. MAY 21, 1959.

(111) CORMAN, J., AND H. M. TSUCHIYA. [ASSIGNEE A]. ENZYMIC PRODUCTION OF DEXTRAN OF INTERMEDIATE MOLECULAR WEIGHTS. U.S. 2,776,925. JAN. 8, 1957.

(112) GROENWALL, A. J. T., AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR THE MANUFACTURE OF DEXTRAN DEGRADATION PRODUCTS FOR MEDICAL PURPOSES. GERMANY 837,007. APRIL 17, 1952.

(113) NOVAK, L. J., AND G. S. STOYCOS. [ASSIGNEE B]. METHOD FOR PRODUCING CLINICAL DEXTRAN. U.S. 2,841,578. JULY 1, 1958.

(114) ------ AND E. E. WITT. [ASSIGNEE B]. METHOD OF PRODUCING CLINICAL DEXTRAN. U.S. 2,972,567. FEB. 21, 1961.

(115) ------ AND E. E. WITT. [ASSIGNEE B]. DEXTRAN AND METHOD OF PRODUCING SAME. BRITAIN 910,736. NOV. 21, 1962.

(116) ------ AND E. E. WITT. [ASSIGNEE B]. DEXTRAN AND METHOD OF PRODUCING SAME. CANADA 653,066. NOV. 27, 1962.

(117) POVIET PRODUCTEN N. V. PROCESS FOR THE MANUFACTURE OF PRODUCTS FROM DEXTRAN FOR PHARMACEUTICAL AND THERAPEUTIC PRODUCTS. BELGIUM (APPLN.) 491,665. OCT. 14, 1949.*

(118) ------. PROCESS FOR PREPARATION OF DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTIC PRODUCTS. NETHERLANDS 76,385. NOV. 15, 1954.

(119) SUGIURA, M., H. ONO, AND T. HIROSE. [ONO PHARMACEUTICAL CO., LTD.]. LOW MOLECULAR WEIGHT DEXTRAN. JAPAN (KOKAI) 75 19,991. MARCH 3, 1975. (CHEM. ABSTR. 1975. 83:56724V.)

(120) WHITESIDE-CARLSON, V., AND W. W. CARLSON. [ASSIGNEE B]. PROCESS FOR THE ENZYMATIC DEGRADATION OF DEXTRAN. GERMANY (DAS) 1,052,639. MARCH 12, 1959.*

(121) ------ AND W. W. CARLSON. [ASSIGNEE B]. METHOD OF PRODUCING CARBOHYDRATE MATERIALS BY BACTERIOLOGICAL AND ENZYMATIC ACTION. CANADA 588,122. DEC. 1, 1959.

C. Use of Dextranases to Inhibit Dental Caries

(122) BABA, K., AND N. SUGASUMA. [LION DENTIFRICE CO., LTD.]. DENTIFRICES. JAPAN (KOKAI) 73 56,836. NOV. 15, 1971. (CHEM. ABSTR. 1973. 79:108011Z.)

(123) BARKER, S. A., AND L. F. WIGGINS. [ASPRO-NICHOLAS LTD.]. COMPOSITIONS FOR USE ON TEETH TO PREVENT CARIES. GERMANY (OFFEN.) 1,965,043. JULY 8, 1971. (CHEM. ABSTR. 1971. 75:101285A.)

(124) BLOCK, P. L., E. E. HOWE, AND M. J. LOVER. [MERCK AND CO., INC.]. 1,6-BIS(5-(2-ETHYLHEXYL)BIGUANIDO) HEXANE DIHYDROCHLORIDE FOR REMOVING TARTAR. GERMANY (OFFEN.) 1,964,196. JUNE 25, 1970. (CHEM. ABSTR. 1970. 73:48552R.)

(125) BOWEN, W. H., AND S. A. BARKER. [ROYAL COLLEGE OF SURGEONS OF ENGLAND; MEDICAL RESEARCH COUNCIL]. MOUTH PREPARATIONS FOR TEETH PLAQUE CONTROL. GERMANY (OFFEN.) 2,329,253. DEC. 13, 1973. (CHEM. ABSTR. 1974. 80:74318H.)

(126) COLGATE-PALMOLIVE CO. USE OF FUNGAL DEXTRANASE IN MOUTH-TREATING COMPOSITIONS. NETHERLANDS 6,912,161. FEB. 11, 1970. (MICROBIOL. ABSTR. 1971. SEC. A, 6(6):A5292.)

(127) ------. COMPOSITIONS CONTAINING BACTERIAL DEXTRANASE FOR USE IN ORAL HYGIENE. FRANCE 2,015,378. JUNE 12, 1970. (MICROBIOL. ABSTR. 1970. SEC. A, 6(3):A3107.)

(128) HARTH, H., K. RAU, AND K. SCHEER. [BLENDAX-WERKE R. SCHNEIDER UND CO.]. DENTIFRICES CONTAINING ENZYMES. GERMANY (OFFEN.) 1,948,469. APRIL 1, 1971. (CHEM. ABSTR. 1971. 74:130290H.)

(129) KAO SOAP CO., LTD. DEXTRANASE-CONTAINING TOOTHPASTE. BRITAIN 1,319,423. JUNE 6, 1973. (CHEM. ABSTR. 1973. 79:70244N.)

(130) KING, W. J., AND G. R. MILLER. [COLGATE-PALMOLIVE CO.]. DENTIFRICE. GERMANY (OFFEN.) 1,940,223. MARCH 19, 1970. (CHEM. ABSTR. 1970. 72:125077X.)

(131) MASAMOTO, Y., AND J. KATSUHARA. [SUNSTAR DENTRIFRICE CO., LTD.]. ENZYME STABILIZATION. JAPAN (KOKAI) 73 49,984. JULY 14, 1973. (CHEM. ABSTR. 1973. 79:103651Y.)

(132) MERCK AND CO., INC. DENTAL HYGIENE COMPOSITIONS CONTAINING DEXTRANASE. PORTUGAL 50,077. NOV. 12, 1969. (MICROBIOL. ABSTR. 1970. SEC. A, 5(11):A7401.)

(133) ------. RECOVERY OF PURIFIED DEXTRANASE. NETHERLANDS 6,915,536. MAY 4, 1970. (MICROBIOL. ABSTR. 1970. SEC. A, 6(1):A38.)

(134) ------. PURIFICATION OF DEXTRANASE. NETHERLANDS 6,915,951. MAY 11, 1970. (MICROBIOL. ABSTR. 1970. SEC. A, 6(1):A39.)

(135) MILLER, G. R. [COLGATE-PALMOLIVE CO.]. DENTURE CLEANER. GERMANY (OFFEN.) 1,963,013. JULY 30, 1970. (CHEM. ABSTR. 1970. 73:69863H.)

(136) ------. [COLGATE-PALMOLIVE CO.]. PREPARATION CONTAINING DEXTRANASE. U.S. 3,630,924. DEC. 28, 1971.

(137) RAU, K. [BLENDAX-WERKE R. SCHNEIDER UND CO.]. ENZYME-CONTAINING DENTIFRICES. GERMANY (OFFEN.) 1,944,308. MARCH 4, 1971. (CHEM. ABSTR. 1971. 74:146415P.)

(138) SHIBUYA, K., AND Y. YAMAZAKI. [LION FAT AND OIL CO., LTD.]. MOUTH CLEANING AGENTS CONTAINING DEXTRANASE AND BACTERIAL CELL WALL-DISSOLVING ENZYMES. JAPAN (KOKAI) 75 58,243. MAY 21, 1975. (CHEM. ABSTR. 1975. 83:103296U.)

(139) STOUDT, T. H., AND H. B. WOODRUFF. [MERCK AND CO., INC.]. TOOTH PASTE CONTAINING DEXTRANASE AGAINST TARTAR. GERMANY (OFFEN.) 1,925,982. NOV. 19, 1970. (CHEM. ABSTR. 1971. 74:15735V.)

(140) SUGASUMA, N., H. BABA, M. KOSHIMIZU, AND K. SAITO. [LION FAT AND OIL CO., LTD.]. DENTIFRICES AND MOUTHWASHES FOR CONTROLLING DENTAL CARIES. JAPAN (KOKAI) 74 108,252. OCT. 15, 1974. (CHEM. ABSTR. 1975. 82:129286V.)

(141) VIDRA, J. D., AND J. H. NACHTIGAL. [COLGATE-PALMOLIVE CO.]. DEXTRANASE-CONTAINING DENTIFRICES AND MOUTHWASHES. GERMANY (OFEN.) 2,358,217. JUNE 12, 1974. (CHEM. ABSTR. 1974. 81:82373H.)

(142) WOODRUFF, H. B., T. H. STOUDT. [MERCK AND CO., INC.]. DEXTRANASE PREPARATIONS FOR CLEANING TEETH. SOUTH AFRICA 68 04,820.. JAN. 26, 1970. (CHEM. ABSTR. 1970. 73:91254G.)

(143) ------, T. H. STOUDT. [MERCK AND CO., INC.]. DEXTRANASE-CONTAINING DENTAL PREPARATIONS. BRITAIN 1,202,629. AUG. 19, 1970. (CHEM. ABSTR. 1970. 73:123530N.)

(144) ------, AND T. H. STOUDT. [MERCK AND CO., INC.]. COMPOSITION FOR CLEANING TEETH. SOUTH AFRICA 69 03,283. NOV. 9, 1970. (CHEM. ABSTR. 1971. 75:52832R.)

(145) ------. [MERCK AND CO., INC.]. METHOD FOR INHIBITING DENTAL PLAQUE. U.S. 3,686,393. AUG. 22, 1972.

OTHER PATENTS: 80 83

D. Miscellaneous Uses of Dextranases

(146) HJERTEN, V. E. S. [PHARMACIA FINE CHEMICALS AB]. ELECTROPHORETIC SEPARATION OF SUBSTANCE MIXTURES. U.S. 3,783,118. JAN. 1, 1974.

(147) TILBURY, R. H. [TATE AND LYLE LTD.]. PRODUCTION OF SUCROSE FROM SUGAR CANE PRODUCTS. SOUTH AFRICA 70 07,416. OCT. 4, 1971. (CHEM. ABSTR. 1972. 77:36738A.)

(148) ------. [TATE AND LYLE LTD.]. IMPROVEMENTS IN THE PRODUCTION OF SUCROSE. BRITAIN 1,290,694. SEPT. 27, 1972. (CHEM. ABSTR. 1972. 77:36738A.)

XXX. Nonenzymatic methods for production of dextrans in the clinical, intermediate, and low-molecular sized ranges

(149) AKTIEBOLAGET PHARMACIA. IMPROVEMENTS IN OR RELATING TO THE DEGRADATION OF DEXTRANE. BRITAIN 583,378. DEC. 17, 1946.

(150) ------. PROCESS FOR PRODUCING POLYMER HOMOLOGUES OF POLYSACCHARIDES. DENMARK 67,180. JULY 12, 1948.

(151) ------. IMPROVEMENTS IN OR RELATING TO THE DEGRADATION OF DEXTRANE. INDIA 40,613. MAY 19, 1949.

(152) ------. PROCESS FOR MANUFACTURING DEXTRANE PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTICAL PREPRATIONS. ARGENTINA 75,276. MARCH 29, 1950.

(153) ------. PROCESS FOR PRODUCING MOLECULARLY MORE UNIFORM DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTICAL PREPARATIONS. SOUTH AFRICA 8,817. APRIL 3, 1950.

(154) ------. PROCESS FOR PRODUCING DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. ARGENTINA 76,991. AUG. 18, 1950.*

(155) ------. PROCESS FOR PRODUCING MOLECULARLY MORE UNIFORM DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTICAL PREPARATIONS. INDIA 42,253. AUG. 22, 1950.

(156) ------. PROCESS FOR THE PRODUCTION OF DEXTRAN DEGRADATION PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. GERMANY (APPLN.) 3,384. JULY 26, 1951.

(157) ------. A PROCESS FOR TREATING DEXTRAN FOR USE IN PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. BRITAIN 673,103. JUNE 4, 1952.

(158) ------. PROCESS FOR PRODUCING DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTICAL PREPARATIONS. BRITAIN 675,085. JULY 2, 1952.

(159) ------. PROCESS FOR PRODUCING POLYMER HOMOLOGUES OF PARTIALLY DEPOLYMERIZED DEXTRAN. DENMARK 77,579. MAY 31, 1954.

(160) ALSOP, R. M. [FISONS PHARMACEUTICALS LTD.]. PROCESS FOR PARTIAL DEPOLYMERIZATION OF DEXTRAN. BRITAIN 1,143,784. FEB. 26, 1969. (CHEM. ABSTR. 1969. 70:98132N.)

(161) ------. [FISONS PHARMACEUTICALS LTD.]. PROCESS FOR THE PARTIAL DEPOLYMERIZATION OF DEXTRANS. U.S. 3,454,553. JULY 8, 1969.

(162) BEHRENS, U., AND M. RINGPFEIL. METHOD FOR THE PRODUCTION OF POLYSACCHARIDES, PARTICULARLY OF DEXTRAN FOR CLINICAL PURPOSES. EAST GERMANY 19,254. JULY 14, 1960. (CHEM. ABSTR. 1961. 55:21475D.)

(163) ------ AND M. RINGPFEIL. [VEB SERUM-WERK BERNBURG]. A PROCESS FOR THE PREPARATION OF POLYSACCHARIDES BY SYNTHESIS. FRANCE (DPA) 1,261,871. APRIL 17, 1961.

(164) ------ AND M. RINGPFEIL. METHOD FOR THE PRODUCTION OF LOW MOLECULAR DEXTRANS WITH MOLECULAR WEIGHT SMALLER THAN 60,000, PARTICULARLY OF STARTERS FOR CONTROLLED SYNTHESIS. EAST GERMANY 21,324. MAY 23, 1961.

(165) ------ AND M. RINGPFEIL. [VEB SERUM-WERK BERNBURG]. PROCESS FOR BIOLOGICAL PRODUCTION OF DEXTRAN, ESPECIALLY FOR CLINICAL PURPOSES. SWITZERLAND 368,266. MAY 15, 1963.

(166) ------ AND M. RINGPFEIL. [VEB SERUM-WERK BERNBURG]. PROCESS FOR THE PRODUCTION OF POLYSACCHARIDES BY A BIOLOGICAL SYNTHESIS, ESPECIALLY OF DEXTRAN WITH CLINICAL PROPERTIES. GERMANY 1,083,020. APRIL 1, 1965.

(167) ------, M. RINGPFEIL, A. GABERT, AND K. KRUEGER. PROCESS FOR THE SEMI CONTINUOUS PRODUCTION OF DEXTRAN. EAST GERMANY 35,367. MARCH 5, 1965. (CHEM. ABSTR. 1965. 63:7624E.)

(168) ------, M. RINGPFEIL, A. GABERT, AND K. KRUEGER. [VEB SERUM-WERK BERNBURG]. PROCESS FOR THE PREPARATION OF POLYSACCHARIDES, ESPECIALLY DEXTRAN, THROUGH CONTROLLED MICROBIOLOGICAL SYNTHESIS BY MEANS OF PRIMER-FREE INOCULUM. EAST GERMANY 35,899. APRIL 26, 1965. ADDITION TO EAST GERMANY 19,254.

(169) BELLAMY, W. D. [GENERAL ELECTRIC CO.]. PROCESS FOR PRODUCTION OF DEXTRAN. GERMANY 958,423. JAN. 31, 1957.

(170) ------. [GENERAL ELECTRIC CO.]. DEPOLYMERIZATION OF HIGH MOLECULAR WEIGHT DEXTRAN. U.S. 2,867,571. JAN. 6, 1959.

(171) CHRISTENSEN, H. M. DEXTRANS SOLUBLE IN COLD WATER. GERMANY (OFFEN.) 1,954,969. MAY 14, 1970. (CHEM. ABSTR. 1970. 73:26882W.)

(172) COMMERCIAL SOLVENTS CORP. IMPROVEMENTS IN OR RELATING TO PROCESS FOR PREPARING DEXTRAN AND THE DEXTRAN RESULTING FROM SAID PROCESS. SOUTH AFRICA 19,310. MAY 17, 1954.

(173) ------. PROCESS FOR PREPARING DEXTRAN. ARGENTINA 94,244. JULY 5, 1954.*

(174) ------. IMPROVEMENTS IN OR RELATING TO PROCESS FOR PREPARING DEXTRAN AND DEXTRAN RESULTING FROM SAID PROCESS. AUSTRALIA 165,029. SEPT. 5, 1955.

(175) ------. IMPROVEMENTS IN OR RELATING TO THE PREPARATION OF DEXTRAN AND THERAPEUTIC INFUSION FLUIDS. BRITAIN 772,535. APRIL 17, 1957.*

(176) ------. AN IMPROVED PROCESS FOR THE PREPARATION OF DEXTRAN. FRANCE (DPA) 1,273,351. SEPT. 4, 1961.

(177) COMMONWEALTH ENGINEERING CO. OF OHIO. PROCESS FOR HYDROLYSIS OF DEXTRAN. BELGIUM 554,243. MAY 15, 1957.

(178) DALTER, R. S. [COMMERCIAL SOLVENTS CORP.]. PROCESS FOR HYDROLYZING DEXTRAN. U.S. 2,727,838. DEC. 20, 1955.

(179) DEXTRAN LIMITED. IMPROVEMENTS RELATIVE TO THE DEGRADATION OF DEXTRAN. BELGIUM 510,036. MARCH 18, 1952.

(180) ------. IMPROVEMENTS RELATING TO THE DEGRADATION OF DEXTRAN. SOUTH AFRICA (SPEC.) 583/52. ACCEPTED JUNE 3, 1952.*

(181) ------. PROCESS FOR DEGRADING DEXTRAN. ARGENTINA 86,604. OCT. 23, 1952.*

(182) ------. IMPROVEMENTS RELATING TO THE DEGRADATION OF DEXTRAN. SOUTH AFRICA 15,275. JAN. 5, 1953.

(183) ------. IMPROVEMENTS RELATING TO THE DEGRADATION OF DEXTRAN. INDIA 46,062. APRIL 20, 1953.

(184) ------. PROCESS FOR PARTIALLY DEPOLYMERIZING DEXTRAN. DENMARK 76,449. OCT. 5, 1953.

(185) ------. PROCESS FOR PREPARING A SUBSTITUTE FOR BLOOD PLASMA, CONSISTING OF DEPOLYMERIZED DEXTRAN. NETHERLANDS 77,200. FEB. 15, 1955.

(186) ------. PROCESS FOR PREPARING A DEXTRAN SUITABLE FOR USE IN THERAPEUTICAL LIQUIDS ALSO PROCESS FOR PREPARING THERAPEUTICAL LIQUIDS CONTAINING SUCH A DEXTRAN. NETHERLANDS (APPLN.) 168,162. JULY 16, 1956.*

(187) ------. A PROCESS FOR THE THERMIC DECOMPOSITION OF DEXTRAN. DENMARK 93,839. JULY 9, 1962.*

(188) DRECHSLER, M., AND W. TOPORSKI. METHOD FOR THE PRODUCTION OF LOW MOLECULAR DEXTRAN WITH STARTER QUALITIES. EAST GERMANY 23,189. MAY 21, 1962.

(189) EAST ANGLIA CHEMICAL CO., LTD. IMPROVEMENTS IN AND RELATING TO THE DEGRADATION OF DEXTRAN. SOUTH AFRICA 6312. JUNE 10, 1949.

(190) ------. IMPROVEMENTS IN AND RELATING TO THE DEGRADATION OF DEXTRAN. INDIA 40,017. JUNE 10, 1949.

(191) ------. IMPROVEMENTS RELATING TO THE MANUFACTURE OF DEXTRAN. SOUTH AFRICA (SPEC.) 1222. ACCEPTED JULY 12, 1950.*

(192) ------. A METHOD OF PARTIALLY DEPOLYMERISING DEXTRAN. INDIA 43,267. MAY 25, 1951.

(193) ------. PROCESS FOR THE PRODUCTION OF DEXTRAN DEPOLYMERIZATES. GERMANY (APPLN.) 1259. JULY 10, 1952.*

(194) ------, A. R. LOCKWOOD, AND V. C. HAWORTH. IMPROVEMENTS RELATING TO THE MANUFACTURE OF DEXTRAN. BRITAIN 681,548. OCT. 29, 1952.

(195) FORD, M. D., AND L. J. NOVAK. [ASSIGNEE B]. ACID HYDROLYSIS OF DEXTRAN IN PRESENCE OF ACTIVATED CHARCOAL. U.S. 2,787,562. APRIL 2, 1957.

(196) GENERAL ELECTRIC CO. IMPROVEMENTS RELATING TO THE DEPOLYMERIZATION OF HIGH MOLECULAR WEIGHT DEXTRAN. BRITAIN 764,547. DEC. 28, 1956.

(197) GROENWALL, A. J. T., AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. MANUFACTURE OF INFUSION AND INJECTION FLUIDS. U.S. 2,437,518. MARCH 9, 1948.

(198) ------ AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR PRODUCING DEXTRAN PRODUCTS HAVING SUBSTANTIALLY UNIFORM MOLECULAR SIZE FOR PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. U.S. 2,644,815. JULY 7, 1953.

(199) ------ AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR PRODUCING DEXTRAN PRODUCTS HAVING SUBSTANTIALLY UNIFORM MOLECULAR SIZE FOR PHARMACEUTICAL AND THERAPEUTICAL PREPARATIONS. CANADA 502,836. MAY 25, 1954.

(200) ------ AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR MANUFACTURE OF DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTICAL PREPARATIONS. GERMANY 916,848. AUG. 19, 1954.

(201) ------ AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. DEXTRAN INJECTION FLUIDS. CANADA 506,063. SEPT. 28, 1954.

(202) ------ AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR MANUFACTURE OF POLYMER HOMOLOGUES OF DEXTRAN. GERMANY 918,532. SEPT. 30, 1954.

(203) ------ AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR MANUFACTURE OF AN AQUEOUS INJECTION SOLUTION DESIGNED AS A PLASMA SUBSTITUTE. GERMANY 919,365. OCT. 21, 1954.

(204) ------ AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR PRODUCING DEXTRAN PRODUCTS FOR PHARMACEUTICAL AND THERAPEUTICAL PREPARATIONS. CANADA 520,216. JAN. 3, 1956.

(205) GUDE, M., AND H. E. SCHULTZE. [BEHRINGWERKE AKT.-GES.]. PROCESS FOR PRODUCTION OF INFUSION PREPARATIONS FOR AUGMENTING CIRCULATION. GERMANY 940,059. MARCH 8, 1956.

(206) HINK, J. H., JR., AND F. F. JOHNSON. [CUTTER LABORATORIES]. METHOD OF DRYING HEAT-SENSITIVE BIOLOGICALLY ACTIVE SUBSTANCES. U.S. 2,731,731. JAN. 24, 1956.

(207) JAMES, A. E. [DEXTRAN LTD.]. DEXTRAN PRODUCTION. BRITAIN 749,515. MAY 30, 1956.

(208) KAUFMAN, W., AND K. BAUER. [FARBENFABRIKEN BAYER AKT.-GES.]. PROCESS FOR PARTIAL DEPOLYMERIZATION OF DEXTRANS AND LEVANS. GERMANY 1,007,951. NOV. 14, 1957.

(209) KOEPSELL, H. J., H. M. TSUCHIYA, AND N. N. HELLMAN. [ASSIGNEE A]. METHOD FOR THE PRODUCTION OF DEXTRAN OF RELATIVELY LOW MOLECULAR WEIGHT. U.S. 2,660,551. NOV. 24, 1953.

(210) ------, N. N. HELLMAN, AND H. M. TSUCHIYA. [ASSIGNEE A]. MODIFICATION OF DEXTRAN SYNTHESIS BY MEANS OF ALTERNATE GLUCOSYL ACCEPTORS. U.S. 2,726,190. DEC. 6, 1955.

(211) KRUEGER, K., AND D. BRUECKNER. PROCESS FOR THE PRODUCTION OF LOW-MOLECULAR DEXTRANS, THROUGH DIRECT SYNTHESIS. EAST GERMANY 31,300. JAN. 5, 1965. (CHEM. ABSTR. 1965. 63:6288C.)

(212) LACKO, L., AND J. MALEK. METHOD FOR ISOLATING THE CLINICAL DEXTRAN FRACTION. EAST GERMANY 19,317. JULY 22, 1960.*

(213) ------ AND J. MALEK. A METHOD OF ISOLATING THE CLINICAL DEXTRAN FRACTION. BRITAIN 877,688. SEPT. 20, 1961.

(214) LOCKWOOD, A. R., AND G. SWIFT. [EAST ANGLIA CHEMICAL CO., LTD.]. IMPROVEMENTS IN AND RELATING TO THE DEGRADATION OF DEXTRAN. BRITAIN 650,783. MARCH 7, 1951.

(215) ------ AND G. SWIFT. [TELL AND USHER LTD.]. DEGRADATION OF DEXTRAN TO PRODUCE A PLASMA SUBSTITUTE. U.S. 2,565,507. AUG. 28, 1951.

(216) ------ AND G. SWIFT. [DEXTRAN LTD.]. DEGRADATION OF DEXTRAN. CANADA 512,714. MAY 10, 1955.

(217) ------. [DEXTRAN LTD.]. DEXTRAN PARTIALLY DEPOLYMERIZED BY THE USE OF SOUND WAVES. CANADA 516,925. SEPT. 27, 1955.

(218) MARGOTTE, E. [FA. B. BRAUN]. PROCESS FOR THE MANUFACTURE OF DEXTRAN CLEAVAGE PRODUCTS. GERMANY (DAS) 1,000,964. JAN. 17, 1957.

(219) MAVI, S. S., K. NARAYAN, AND R. S. DUBEY. CLARIFICATION OF POLYSACCHARIDE HYDROLYZATES. INDIA 53,655. FEB. 8, 1956. (CHEM. ABSTR. 1956. 50:9772B.).

(220) MEITO SANGYO K.K. PROCESS FOR FRACTIONAL PRECIPITATION OF DEXTRAN HYDROLYZATE FOR THERAPEUTIC PURPOSES. GERMANY (DAS) 1,246,166. AUG. 3, 1967. (STAERKE 1969. 21(9):248).

(221) MIODUSZEWSKI, J. Z., AND M. H. MIODUSZEWSKA. [INSTYTUT FARMACEUTYCZNY]. DEXTRAN OF CONTROLLED VISCOSITY. POLAND 48,285. AUG. 11, 1965. (CHEM. ABSTR. 1966. 64:19958B.)

(222) MOTOSATO, Y. VINYL ACETATE COPOLYMER RESIN GRANULES FOR SEPARATION OF MATERIALS WITH DIFFERENT MOLECULAR WEIGHTS. JAPAN 72 03,722. FEB. 1, 1972. (CHEM. ABSTR. 1972. 77:115611G.)

(223) NOVAK, L. J. [ASSIGNEE B]. METHOD FOR HYDROLYZING DEXTRAN. U.S. 2,789,066. APRIL 16, 1957.

(224) ------. [ASSIGNEE B]. PROCESS FOR DEXTRAN SUITABLE AS A BLOOD-PLASMA SUBSTITUTE. GERMANY (DAS) 1,044,361. NOV. 20, 1958.

(225) ------. [ASSIGNEE B]. METHOD FOR HYDROLYZING DEXTRAN. BRITAIN 811,770. APRIL 8, 1959.*

(226) ------ AND E. E. WITT. [ASSIGNEE B]. PRODUCT AND METHOD FOR PRODUCING CLINICAL DEXTRAN INCLUDING IONIZABLE CALCIUM. U.S. 2,988,482. JUNE 13, 1961.

(227) OKUYAMA, T., AND M. NOMOTO. [BIOCHEMICAL INDUSTRY CO., LTD.]. MOLECULAR WEIGHT REDUCTION OF POLYSACCHARIDES. JAPAN 71 11,357. (CHEM. ABSTR. 1971. 75:7731W.)

(228) PAUTARD, F. G. E., AND M. STACEY. [DEXTRAN LTD.]. IMPROVEMENTS RELATING TO THE DEGRADATION OF DEXTRAN. BRITAIN 719,382. DEC. 1, 1954.

(229) ------ AND M. STACEY. [DEXTRAN LTD.]. THERMAL DEGRADATION OF DEXTRAN. MEXICO 55,844. MAY 31, 1955.

(230) ------. [DEXTRAN LTD.]. IMPROVEMENTS RELATING TO THE DEGRADATION OF DEXTRAN. BRITAIN 732,923. JUNE 29, 1955.

(231) ------ AND M. STACEY. [DEXTRAN LTD.]. DEGRADATION OF DEXTRAN. CANADA 517,552. OCT. 18, 1955.

(232) ------ AND M. STACEY. [DEXTRAN LTD.]. PROCESS FOR HEAT DEGRADATION OF DEXTRAN. SWEDEN (APPLN.) 2572/52. JAN. 4, 1958.*

(233) SATO, S., Y. OHTAKA, AND S. MATSUMOTO. [MITSUBISHI CHEMICAL INDUSTRIES CO., LTD.]. FILLER FOR GEL PERMEATION CHROMATOGRAPHY OF DEXTRAN. JAPAN (KOKAI) 75 15,600. FEB. 19, 1975. (CHEM. ABSTR. 1975. 83:131887F.)

(234) STACEY, M., AND F. G. E. PAUTARD. [DEXTRAN LTD.]. PROCESS FOR DEGRADING DEXTRAN IN THE PRESENCE OF A REDUCING AGENT. U.S. 2,765,244. OCT. 2, 1956.

(235) STAVELY, H. E. [COMMERCIAL SOLVENTS CORP.]. PROCESS FOR PREPARING DEXTRAN AND THE DEXTRAN RESULTING FROM SAID PROCESS. CANADA 505,456. AUG. 31, 1954.

(236) ------. [COMMERCIAL SOLVENTS CORP.]. CLINICAL DEXTRAN COMPOSITION. U.S. 2,708,174. MAY 10, 1955.

(237) STOYCOS, G. S. [ASSIGNEE B]. HYDROLYSIS OF CRUDE DEXTRAN FERMENTATES. U.S. 2,687,368. AUG. 24, 1954.

(238) TAGA, Y., AND M. SHAMOTO. [MEITO SANGYO K.K.]. FRACTIONAL PRECIPITATION OF DEXTRAN HYDROLYZATES. GERMANY 1,246,166. AUG. 3, 1967. (CHEM. ABSTR. 1967. 67:83186X.)

(239) TSENTRALNY ORDENA LENINA INST. GEMATOLOGII I PERELIVANIA PROVI. FERMENTATIVE PRODUCTION OF MEDIUM-MOLECULAR FRACTION OF PARTIALLY-HYDROLYSED DEXTRAN. PAKISTAN 122,298. JAN. 21, 1972. (MICROBIOL. ABSTR. 1972. SEC. A, 7(11):7A9905.)

(240) VEB SERUM-WERK BERNBURG. PROCESS FOR THE BIOLOGICAL SYNTHESIS OF POLYSACCHARIDES ESPECIALLY DEXTRAN WITH CLINICAL QUALITIES. AUSTRIA 6339/57. PUBLISHED FEB. 15, 1959.*

(241) ------. BIOLOGICAL SYNTHESIS OF DEXTRAN. BRITAIN 888,298. JAN. 31, 1962.

(242) VON LILLIENSKIOLD, M. IMPROVEMENTS IN THE PROCESS FOR PREPARING DEXTRAN DECOMPOSITION PRODUCTS. BELGIUM 524,053. NOV. 5, 1953.

(243) ------. PROCESS FOR PREPARING DECOMPOSITION PRODUCTS OF DEXTRAN. BELGIUM 524,054. NOV. 5, 1953.

(244) ------. PROCESS FOR DECOMPOSING DEXTRAN IN A NEUTRAL MEDIUM. BELGIUM 524,055. NOV. 5, 1953.

(245) ------. PROCESS FOR DEGRADING DEXTRAN IN A NEUTRAL MEDIUM. ARGENTINA 97,433. MAY 12, 1955.

(246) ------ AND W. WILLENBERG. [MONTAGNE VON LILLENSKIOLD]. PROCESS FOR MANUFACTURE OF DEXTRAN DEGRADATION PRODUCTS FOR PHARMACEUTICAL PURPOSES. GERMANY 930,652. JULY 21, 1955.

(247) ------ AND W. WILLENBERG. [MONTAGNE VON LILLIENSKIOLD]. PROCESS FOR MANUFACTURE OF DEXTRAN DEGRADATION PRODUCTS FOR PHARMACEUTICAL PURPOSES. GERMANY 936,594. DEC. 15, 1955.

(248) ------ AND W. WILLENBERG. PROCESS FOR DEPOLYMERIZATION OF DEXTRAN IN NEUTRAL MEDIUM. GERMANY 938,209. JAN. 26, 1956.

(249) ------. PROCESS OF MANUFACTURING DEXTRAN DEGRADATION PRODUCTS FOR PHARAMACEUTICAL PURPOSES. ARGENTINA 101,156. FEB. 10, 1956.

(250) ------. PROCESS OF MANUFACTURING DEXTRAN DEGRADATION PRODUCTS FOR PHARMACEUTICAL PURPOSES. ARGENTINA 101,157. FEB. 10, 1956.

(251) ------. PROCESS FOR PREPARING DEXTRAN DEGRADATION PRODUCTS FOR PHARMACEUTICAL PURPOSES BY PARTIAL DEPOLYMERIZATION OF DEXTRAN IN AN ACIDIC MEDIUM. NETHERLANDS 83,550. DEC. 15, 1956.

(252) ------. PROCESS FOR THE MANUFACTURE OF DEXTRANE DEGRADATION PRODUCTS FOR PHARMACEUTICAL PURPOSES. AUSTRIA 189,743. APRIL 25, 1957.

(253) ------. PROCESS OF OBTAINING DEGRADATION PRODUCTS OF DEXTRAN FOR PHARMACOLOGICAL PURPOSES. MEXICO 59,903. MARCH 19, 1959.

(254) ------. PROCESS OF PREPARING DEXTRAN DEGRADATION PRODUCTS FOR PHARMACEUTICAL PURPOSES. MEXICO 59,920. MARCH 24, 1959.

(255) ------. PROCESS FOR THE DEGRADATION OF DEXTRAN IN A NEUTRAL MEDIUM. MEXICO 59,921. MARCH 24, 1959.

(256) WILLENBERG, W. [MONTAGNE VON LILLIENSKIOLD]. PROCESS FOR MANUFACTURE OF DEXTRAN DEGRADATION PRODUCTS FOR PHARMACEUTICAL PURPOSES. SWITZERLAND 322,812. JUNE 30, 1957.

(257) WIMMER, E. L. [AMERICAN SUGAR REFINING CO.]. TREATMENT OF DEXTRAN. U.S. 2,686,778. AUG. 17, 1954.

(258) WOLFF, I. A., R. L. MELLIES, AND C. E. RIST. [ASSIGNEE A]. FRACTIONATION OF DEXTRAN PRODUCTS. U.S. 2,712,007. JUNE 28, 1955.

(259) ------, P. R. WATSON, AND C. E. RIST. [ASSIGNEE A]. THERMAL MODIFICATION OF DEXTRAN. U.S. 2,719,147. SEPT. 27, 1955.

OTHER PATENTS: 14 33 39

XXXI. Special procedures for purifying and stabilizing clinical dextrans and their solutions

(260) AKTIEBOLAGET PHARMACIA. NEW COMPOUNDS OF HYDROXYALKYLATED DEXTRAN, THEIR PROCESS OF PRODUCTION, AND THERAPEUTICAL COMPOSITIONS CONTAINING THEM. BELGIUM 660,444. SEPT. 1, 1965. (CHEM. ABSTR. 1966. 64:5196B.)

(261) ------. DEXTRAN COMPOUNDS, METHODS AND COMPOSITIONS. BRITAIN 1,015,279. DEC. 31, 1965.

(262) ------. HYDROXYALKYL DEXTRANS. NETHERLANDS (APPLN.) 6,410,005. MARCH 1, 1966. (CHEM. ABSTR. 1966. 65:578D.)

(263) CHARLES E. FROSST & CO. PRODUCING DEXTRAN PRODUCTS. AUSTRALIA 163,504. MARCH 4, 1953.

(264) ------. PROCESS FOR MANUFACTURING DEXTRAN-BASE PRODUCTS. BELGIUM 518,334. MARCH 11, 1953.

(265) ------. PROCESS FOR PRODUCING DEXTRAN PRODUCTS SUITABLE FOR PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. SOUTH AFRICA (SPEC.) 435/53. ACCEPTED AUG. 3, 1953.*

(266) ------. PROCESS FOR PRODUCING DEXTRAN PRODUCTS SUITABLE FOR PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. INDIA 49,133. SEPT. 8, 1954.

(267) ------. PROCESS FOR PREPARING PARTIALLY DEPOLYMERIZED DEXTRAN. NETHERLANDS 80,971. MARCH 15, 1956.

(268) COMMONWEALTH ENGINEERING CO. OF OHIO. AN IMPROVED CLINICAL DEXTRAN AND METHOD FOR PRODUCING THE SAME. BRITAIN 813,960. MAY 27, 1959.

(269) FLODIN, P. G. M., K. A. GRANATH, B. G. A. INGELMAN, AND C. JOHANSSON. [AKTIEBOLAGET PHARMACIA]. NEW COMPOUNDS OF HYDROXYALKYLATED DEXTRAN AND THERAPEUTICAL COMPOSITIONS CONTAINING THEM. FRANCE (M) 3515. OCT. 4, 1965. (CHEM. ABSTR. 1966. 64:6739E.)

(270) HULTIN, E., AND L. NORDSTROEM. DEXTRAN GLYCOSIDES. SWEDEN 146,220. JULY 20, 1954. (CHEM. ABSTR. 1955. 49:1286I.)

(271) ------ AND L. NORDSTROEM. BLOOD PLASMA SUBSTITUTE. BRITAIN 718,344. NOV. 10, 1954.

(272) ------ AND L. NORDSTROEM. PROCESS FOR THE MANUFACTURE OF GLYCOSIDES FROM DEXTRAN. GERMANY 929,248. JUNE 23, 1955.

(273) ------ AND L. NORDSTROEM. PROCESS FOR PRODUCING GLUCOSIDES BY DEGRADING DEXTRAN. DENMARK 84,623. NOV. 25, 1957.

(274) ------ AND L. NORDSTROEM. DEXTRAN GLUCOSIDES, PREPARATION THEREOF, AND BLOOD SUBSTITUTES CONTAINING THE SAME. U.S. 2,929,764. MARCH 22, 1960.

(275) KRUEGER, D., K. KRUEGER, AND I. IHLO. PURIFICATION OF ORGANIC NONELECTROLYTES. EAST GERMANY 65,785. NOV. 24, 1967. (CHEM. ABSTR. 1969. 71:74042C.)

(276) LEVI, M. M. I., AND E. LOZINSKI. [CHARLES E. FROSST & CO.]. PROCESS FOR MANUFACTURE OF PRODUCTS DERIVED FROM DEXTRAN. FRANCE 1,081,137. JUNE 9, 1954.

(277) ------ AND E. LOZINSKI. [CHARLES E. FROSST & CO.]. PROCESS FOR PRODUCING DEXTRAN PRODUCTS SUITABLE FOR PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. BRITAIN 730,982. JUNE 1, 1955.

(278) ------ AND E. LOZINSKI. [CHARLES E. FROSST & CO.]. PROCESS FOR PRODUCING DEXTRAN PRODUCTS SUITABLE FOR PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. CANADA 518,496. NOV. 15, 1955.

(279) ------ AND E. LOZINSKI. [CHARLES E. FROSST & CO.]. PROCESS FOR MANUFACTURE OF POLYMERIC HOMOLOGUES OF DEXTRAN. GERMANY 940,135. MARCH 8, 1956.

(280) ------ AND E. LOZINSKI. [CHARLES E. FROSST & CO.]. PROCESS FOR PRODUCING DEXTRAN PRODUCTS SUITABLE FOR PHARMACEUTICAL AND THERAPEUTIC PREPARATIONS. U.S. 2,762,727. SEPT. 11, 1956.

(281) ------ AND E. LOZINSKI. [CHARLES E. FROSST & CO.]. PROCESS FOR PREPARATION OF POLYMERIC HOMOLOGUES OF DEXTRAN. SWEDEN 160,053. JUNE 13, 1957.

(282) PULLMAN, J. W. [CUTTER LABORATORIES]. PHARMACEUTICAL PACKAGE. U.S. 3,358,825. DEC. 19, 1967.

(283) ROSKILDE MEDICAL CO. LTD. PROCESS FOR OBTAINING PARTIALLY DEPOLYMERIZED PRODUCTS FROM DEXTRAN. BRAZIL 64,597. NOV. 7, 1952.*

(284) ------. PROCESS FOR MANUFACTURING DEPOLYMERIZED DEXTRAN PRODUCTS. ARGENTINA 90,371. AUG. 18, 1953.*

(285) ------. PROCESS FOR THE PRODUCTION OF PARTIALLY DEPOLYMERIZED DEXTRAN PRODUCTS. AUSTRIA A5913/52. PUBLISHED DEC. 15, 1955.*

(286) ------. PROCESS FOR PREPARATION OF PARTIALLY DEPOLYMERIZED DEXTRAN PRODUCTS. AUSTRIA 187,241. OCT. 25, 1956.

(287) ------. PROCESS FOR DEPOLYMERIZING DEXTRAN AND PREPARATION OF A SUBSTITUTE FOR BLOOD PLASMA FROM THE DEPOLYMERIZED PRODUCT. NETHERLANDS (APPLN.) 173,644. MAY 15, 1957.*

(288) STANKO, G. L. [ABBOTT LABORATORIES]. STABILIZED DEXTRAN COMPOSITION. U.S. 3,066,814. OCT. 31, 1961.

(289) WIEMAN, R. L. [COMMERCIAL SOLVENTS CORP.]. PREPARING CLINICAL DEXTRAN. U.S. 2,784,143. MARCH 5, 1957.

(290) ZEIF, M., AND J. R. STEVENS. [J. T. BAKER CHEMICAL CO.]. HYDROGENATED DEXTRAN. U.S. 2,807,610. SEPT. 24, 1957.

XXXII. Industrial uses

A. Agricultural Purposes

(291) COMMONWEALTH ENGINEERING CO. OF OHIO. SEEDS COATED WITH DEXTRAN AND PROCEDURE FOR THEIR PREPARATION. BELGIUM 550,341. NOV. 20, 1956.

(292) HILER, M. J. [ASSIGNEE B]. SOIL CONDITIONER AND METHOD OF USING. U.S. 2,901,864. SEPT. 1, 1959.

(293) ------. [ASSIGNEE B]. SOIL CONDITIONER. CANADA 604,969. SEPT. 13, 1960.

(294) NOVAK, L. J. [ASSIGNEE B]. SOIL STABILIZATION. U.S. 2,756,134. JULY 24, 1956.

(295) ------ AND E. E. WITT. [ASSIGNEE B]. SOIL CONDITIONING AND FERTILIZING. U.S. 2,826,002. MARCH 11, 1958.

(296) PEAKE, P. Q. [ASSIGNEE B]. DEXTRAN COATED SEEDS AND METHODS OF PREPARING THEM. U.S. 2,764,843. OCT. 2, 1956.

(297) WITT, E. E., AND L. J. NOVAK. [ASSIGNEE B]. SOIL CONDITIONING AND STABILIZING WITH A COMPOSITION COMPRISING LOW MOLECULAR WEIGHT DEXTRAN. U.S. 2,822,643. FEB. 11, 1958.

(298) ------ AND L. J. NOVAK. [ASSIGNEE B]. SOIL CONDITIONING AND STABILIZING WITH A COMPOSITION COMPRISING LOW MOLECULAR WEIGHT DEXTRAN. CANADA 602,853. AUG. 2, 1960.

(299) ------ AND L. J. NOVAK. [ASSIGNEE B]. SOIL CONDITIONING AND STABILIZING WITH A COMPOSITION COMPRISING LOW MOLECULAR WEIGHT DEXTRAN. BRITAIN 862,712. MARCH 15, 1961.

B. Production of Petroleum, Metals, and Atomic Fuel

(300) BAILEY, L. H., W. L. OWEN, JR., AND W. L. OWEN. PRODUCTION OF MUD-LADEN DRILLING FLUIDS. U.S. 2,360,327. OCT. 17, 1944.

(301) BALL, P. W., J. H. GRIMES, AND K. T. B. SCOTT. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. IMPROVEMENTS IN OR RELATING TO PROCESSES FOR THE PREPARATION OF METAL-CONTAINING COMPOUNDS. BRITAIN 1,420,128. JAN. 7, 1976.

(302) CYPERT, J. D., AND J. T. PATTON. [JERSEY PRODUCTION RESEARCH CO.]. STABILIZED DEXTRAN SOLUTIONS. U.S. 3,084,122. APRIL 2, 1963.

(303) DODD, C. G. [PURE OIL CO.]. THERMALLY STABLE ATTAPULGITE-BASED DRILLING MUD. U.S. 3,046,221. JULY 24, 1962.

(304) DOW CHEMICAL CO. PROCESS FOR PREPARATION OF ALUMINA. FRANCE 1,342,576. NOV. 8, 1963.

(305) DRESS, W., AND J. H. GRIMES. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. IMPROVEMENTS IN OR RELATING TO THE CHEMICAL PRODUCTION OF METAL-CONTAINING MATERIALS AS PARTICLES AND OTHER CONFIGURATIONS. BRITAIN 1,175,834. DEC. 23, 1969.

(306) DUMBAULD, G. K., AND P. H. MONAGHAN. [JERSEY PRODUCTION RESEARCH CO.]. DRILLING FLUIDS FOR USE IN WELLS. U.S. 3,065,170. NOV. 20, 1962.

(307) GRIMES, J. H., AND E. S. LANE. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. MIXED METAL OXIDES. GERMANY (OFFEN.) 1,951,382. JUNE 4, 1970. (CHEM. ABSTR. 1970. 73:27114J.)

(308) ------ AND W. DRESS. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. METAL-CONTAINING PELLETS AND GRIT. GERMANY (OFFEN.) 2,004,219. SEPT. 10, 1970. (CHEM. ABSTR. 1970. 73:104778H.)

(309) ------ AND E. S. LANE. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. IMPROVEMENTS IN OR RELATING TO THE PRECIPITATION FROM SOLS OF MATERIALS CONTAINING METALS IN NON-ELEMENTAL FORM. BRITAIN 1,231,385. MAY 12, 1971.

(310) ------, K. T. B. SCOTT, AND N. J. MCKENNA. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. PRECIPITATING METAL-CONTAINING COMPOUNDS AS IN THE AQUEOUS PHASE OF DISPERSED GEL PARTICELS. GERMANY (OFFEN.) 2,142,645. MARCH 2, 1972. (CHEM. ABSTR. 1972. 77:22420D.)

(311) ------ AND E. S. LANE. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. IMPROVEMENTS IN OR RELATING TO THE PREPARATION OF MATERIALS OF THE GENERAL TYPE COMPRISING MIXED OXIDES. BRITAIN 1,286,257. AUGUST 23, 1972.

(312) ------ AND W. DRESS. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. IMPROVEMENTS IN OR RELATING TO PRECIPITATION PROCESSES FOR METAL-CONTAINING MATERIALS. BRITAIN 1,286,871. AUGUST 23, 1972.

(313) ------ AND W. DRESS. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. PRECIPITATION PROCESSES FOR METAL-CONTAINING MATERIALS. U.S. 3,716,605. FEB. 13, 1973.

(314) ------ AND E. S. LANE. METAL CONTAINING MATERIALS FROM SOLS. U.S. 3,776,987. DEC. 4, 1973. (CHEM. ABSTR. 1974. 80:98014G.)

(315) ------, K. T. B. SCOTT, AND N. J. MCKENNA. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. IMPROVEMENTS IN OR RELATING TO PROCESSES FOR PRECIPITATING METAL COMPOUNDS. BRITAIN 1,350,389. APRIL 18, 1974.

(316) LINDBLOM, G. P., G. D. ORTLOFF, AND J. T. PATTON. [JERSEY PRODUCTION RESEARCH CO.]. DISPLACEMENT OF OIL FROM PARTIALLY DEPLETED RESERVOIRS. CANADA 654,809. DEC. 25, 1962.

(317) LUMMUS, J. L., AND B. V. RANDALL. [PAN AMERICAN PETROLEUM CORP.]. LOW-FRICTION DRILLING FLUIDS. U.S. 3,472,769. OCT. 14, 1969.

(318) MUELLER, P., W. KLIPP, B. HEYNE, AND OTHERS. DEEP BORE DRILLING MUD WITH COMBINED USE OF SPECIAL DEXTRANS. EAST GERMANY 47,403. JULY 25, 1966. (CHEM. ABSTR. 1967. 66:48031A.)

(319) OWEN, W. L. [JOHN U. BARR]. PRODUCTION OF MUD-LADEN DRILLING FLUIDS. U.S. 2,868,725. JAN. 13, 1959.

(320) ------. TREATMENT OF STARCHES AND GUMS AND COMPOSITIONS THEREOF. U.S. 2,908,597. OCT. 13, 1959.

(321) PATTON, J. T. [JERSEY PRODUCTION RESEARCH CO.]. WATERFLOODING. VENEZUELA 11,312. JULY 10, 1961.*

(322) ------. [JERSEY PRODUCTION RESEARCH CO.]. WATERFLOODING. U.S. 3,042,611. JULY 3, 1962.

(323) ------. [JERSEY PRODUCTION RESEARCH CO.]. WATERFLOODING. CANADA 654,774. DEC. 25, 1962.

(324) RUDISELL, S. R. [PHILLIPS PETROLEUM CO.]. SECONDARY RECOVERY FROM PLURAL PRODUCING HORIZONS. U.S. 3,251,413. MAY 17, 1966.

(325) SCARGILL, D., J. H. GRIMES, AND K. T. B. SCOTT. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. IRON ALLOY POWDERS CONTAINING CHROMIUM AND OR MANGANESE. BRITIAN 1,363,422. AUG. 14, 1974. (CHEM. ABSTR. 1974. 81:174193C.)

(326) SCOTT, K. T. B., J. H. GRIMES, AND P. W. BALL. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. SEPARATING METALS FROM THEIR MIXTURES. GERMANY (OFFEN.) 2,061,208. JUNE 16, 1971. (CHEM. ABSTR. 1971. 75:120411E.)

(327) ------, J. H. GRIMES, AND P. W. BALL. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. IMPROVEMENTS IN OR RELATING TO PROCESSES FOR SEPARATING METALS. BRITAIN 1,325,870. AUG. 8, 1973.

(328) ------, J. H. GRIMES, AND P. W. BALL. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. EXTRACTING METALS FROM THEIR SALT SOLUTIONS. GERMANY (OFFEN.) 2,216,417. OCT. 11, 1973. (CHEM. ABSTR. 1974. 80:39580R.)

(329) ------, J. H. GRIMES, AND P. W. BALL. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. METAL SEPARATION BY GELS. BRITAIN 1,346,295. FEB. 6, 1974.

(330) ------, J. H. GRIMES, AND P. W. BALL. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. PROCESSES FOR EXTRACTING METAL VALUES FROM SOLUTIONS. U.S. 3,804,945. APRIL 16, 1974.

(331) ------, J. H. GRIMES, AND P. W. BALL. [UNITED KINGDOM ATOMIC ENERGY AUTHORITY]. SEPARATING METALS. CANADA 962,457. FEB. 11, 1975. (CHEM. ABSTR. 1975. 83:13986Q.)

(332) SHALER, R. G. [AMERICAN TANSUL CO.]. METHOD OF TREATMENT OF ORE AND PRODUCT. U.S. 3,189,557. JUNE 15, 1965.

(333) SPARKS, W. J. [JERSEY PRODUCTION RESEARCH CO.]. VISCOUS WATERFLOODING. U.S. 3,053,765. SEPT. 11, 1962.

(334) TOULMIN, H. A., JR. [ASSIGNEE B]. LOW-WATER-LOSS CEMENT SLURRY COMPRISING DEXTRAN. U.S. 2,823,135. FEB. 11, 1958.

(335) UNITED KINGDOM ATOMIC ENERGY AUTHORITY. FUEL PARTICLES PRODUCTION. FRANCE 1,519,066. MARCH 29, 1968. (CHEM. ABSTR. 1969. 70:12043M.)

(336) VAN HEININGEN, J., H. J. DE HAAN, AND J. D. JANSSEN. [N. V. DE BATAAFSCHE PETROLEUM MAATSCHAPPIJ]. PROCEDURE FOR RECOVERING PETROLEUM FROM ROCK. NETHERLANDS 89,580. NOV. 15, 1958.

C. Photographic, Roentgenographic, Printing and Plating

(337) ALLEN, A. W. [SCHERING CORP.]. DEXTRAN ROENTGENOGRAPHIC PREPARATION. U.S. 2,677,645. MAY 4, 1954.

(338) BOLTON, W. M. [UNION CARBIDE CORP.]. MASKING MATERIAL PARTICULARLY FOR GAS PLATING PROCESSES. U.S. 2,970,064. JAN. 31, 1961.

(339) COHEN, A. B., AND C. D. SHACKLETT. [E.I. DU PONT DE NEMOURS & CO.]. SILVER HALIDE-BASED PHOTOGRAPHIC EMULSIONS. BELGIUM 619,939. JAN. 9, 1963. (CHEM. ABSTR. 1963. 58:12108D.)

(340) ------. [E.I. DU PONT DE NEMOURS & CO.]. PHOTOGRAPHIC EMULSIONS. U.S. 3,203,804. AUG. 31, 1965.

(341) E.I. DU PONT DE NEMOURS & CO. IMPROVEMENTS IN OR RELATING TO PHOTOGRAPHIC SILVER HALIDE EMULSIONS. BRITAIN 875,100. AUG. 16, 1961.

(342) GARRETT, A. G., AND R. J. LE STRANGE. [E.I. DU PONT DE NEMOURS & CO.]. HAZE REDUCTION OF PHOTOGRAPHIC EMULSIONS CONTAINING A COVERING POWER AGENT. U.S. 3,272,631. SEPT. 13, 1966.

(343) JENNINGS, A. B. [E.I. DU PONT DE NEMOURS & CO.]. IMPROVEMENTS IN OR RELATING TO PHOTOGRAPHIC ELEMENTS COMPRISING SILVER HALIDE EMULSIONS. AUSTRALIA 243,105. JAN. 31, 1960.

(344) ------. [E.I. DU PONT DE NEMOURS & CO.]. PHOTOGRAPHIC EMULSIONS AND ELEMENTS. CANADA 639,676. APRIL 10, 1962.

(345) ------. [E.I. DU PONT DE NEMOURS & CO.]. PHOTOGRAPHIC EMULSIONS AND ELEMENTS CONTAINING DEXTRAN. U.S. 3,063,838. NOV. 13, 1962.

(346) KLINGER, G. H., AND M. V. CWIKLA. [GAF CORP.]. ACCELERATED RIPENING OF PHOTOGRAPHIC EMULSIONS. U.S. 3,429,708. FEB. 25, 1969.

(347) POWERS CHEMCO INC. LIGHT-SENSITIVE COPYING LAYER FOR PRINTING PLATES. GERMANY 1,071,481. JUNE 2, 1960. (CHEM. ABSTR. 1962. 57:13335I.)

(348) SCHWARZ, G. [POWERS CHEMCO INC.]. PHOTOSENSITIVE RESISTS AND PHOTOMECHANICAL PROCESS. U.S. 2,942,974. JUNE 28, 1960.

OTHER PATENTS: 873 THROUGH 884

D. Textiles, Fibers, Filaments, and Paper

(349) BEHRENS, U., M. RINGPFEIL, A. GABERT, AND E. OTTE. CREASE-RESISTANT FINISH FOR CELLULOSE TEXTILES. EAST GERMANY 42,400. FEB. 5, 1966. (CHEM. ABSTR. 1966. 65:7360A.)

(350) COMMONWEALTH ENGINEERING CO. OF OHIO. NEW COMPOSITIONS AND PROCESS FOR PUTTING INTO APPLICATION. BELGIUM 553,805. APRIL 16, 1957.

(351) DAUL, G. C., T. F. DRAKE, AND M. W. DUKE. [COURTAULDS, LTD.]. FORMALDEHYDE MODIFICATION OF CELLULOSE CONDUCTED IN THE PRESENCE OF A STIFFENING AGENT AND A LEWIS ACID METALLIC SALT. U.S. 3,275,402. SEPT. 27, 1966.

(352) DENISTON, G. L. [ASSIGNEE B]. PROCESS OF COATING COTTON YARN. U.S. 2,706,690. APRIL 19, 1955.

(353) ------. [ASSIGNEE B]. MANUFACTURE OF FILAMENTS CONTAINING DEXTRAN AND AMINO-FORMALDEHYDE. CANADA 595,942. APRIL 12, 1960.

(354) DEUTSCHE AKADEMIE DER WISSCHENSCHAFTEN ZU BERLIN. PROCESS FOR MAKING TEXTILES ON THE BASIS OF CELLULOSE FIBRES RESISTANT AGAINST SWELLING AND CREASING. AUSTRIA A1023/64. PUBLISHED SEPT. 15, 1964.*

(355) DRUMMOND, F. E., AND L. J. NOVAK. [ASSIGNEE B]. TIRE CORDS AND FABRICS AND TIRES INCLUDING THE SAME. U.S. 2,839,119. JUNE 17, 1958.

(356) HILER, M. J. [ASSIGNEE B]. DEXTRAN CONTAINING SIZING COMPOSITION. U.S. 2,880,105. MARCH 31, 1959.

(357) ------. [ASSIGNEE B]. FIBERS, YARNS AND FILAMENTS OF WATER-INSOLUBLE DEXTRAN. U.S. 2,972,178. FEB. 21, 1961.

(358) ------. [ASSIGNEE B]. DEXTRAN CONTAINING SIZING COMPOSITION. U.S. 2,989,409. JUNE 20, 1961.

(359) ------. [ASSIGNEE B]. PROCESS AND COMPOSITION FOR STABILIZING AND VAT DYEING REGENERATED CELLULOSE TEXTILES EMPLOYING FORMALDEHYDE AND WATER-SOLUBLE DEXTRAN. U.S. 3,066,996. DEC. 4, 1962.

(360) KRESS, B. H. [QUAKER CHEMICAL PRODUCTS CORP.]. METHOD OF INSOLUBILIZING POLYMERIC HYDROXYL-BEARING COMPOUNDS. U.S. 2,968,581. JAN. 17, 1961.)

(361) NOVAK, L. J., W. S. HOGUE, AND H. J. HOMER. [ASSIGNEE B]. COLLOIDAL DISPERSION OF DEXTRAN FOR FINISHING TEXTILES. U.S. 2,756,160. JULY 24, 1956.

(362) ------ AND W. S. HOGUE. [ASSIGNEE B]. SHAPED ARTICLES COMPRISING REGENERATED CELLULOSE. U.S. 2,768,097. OCT. 23, 1956.

(363) ------ AND W. S. HOGUE. [ASSIGNEE B]. SHAPED ARTICLES COMPRISING REGENERATED CELLULOSE. U.S. 2,914,414. NOV. 24, 1959.

(364) ------ AND J. T. TYREE. [ASSIGNEE B]. MOISTURE-RESISTANT PAPER. U.S. 2,786,786. MARCH 26, 1957.

(365) ------, W. S. HOGUE, AND H. J. HOMER. [ASSIGNEE B]. DEXTRAN AS A STARCH SUBSTITUTE. CANADA 595,637. APRIL 5, 1960.

(366) ------ AND H. J. HOMER. [ASSIGNEE B]. DEXTRAN AS A STARCH SUBSTITUTE. CANADA 595,788. APRIL 5, 1960.

(367) ------. [ASSIGNEE B]. CIGARETTE PAPER PRODUCTS COMPRISING WATER INSOLUBLE DEXTRAN. U.S. 3,070,486. DEC. 25, 1962.

(368) ------. [ASSIGNEE B]. FIBROUS WEBS, INCLUDING PAPER, FORMED FROM WATER-INSOLUBLE DEXTRAN FIBERS. U.S. 3,070,487. DEC. 25, 1962.

(369) TEE PAK INC. PRODUCTION OF DECAUSTICIZED POLYSACCHARIDE XANTHATES AND THEIR UTILIZATION. BRITAIN 981,362. JAN. 27, 1965.

(370) TOULMIN, H. A., JR. [ASSIGNEE B]. PRINTING PASTES FOR TEXTILES, PAPER, LEATHER AND THE LIKE. U.S. 2,933,403. APRIL 19, 1960.

E. Miscellaneous

Adhesives, films and encapsulation, paints, plastics, resins, sedimentation, stabilize solutions, and others.

(371) ALBERT, R. E. [E.I. DU PONT DE NEMOURS & CO.]. WATER-SOLUBLE PLASTIC PACKING FILMS FOR PESTICIDES. GERMANY (OFFEN.) 2,139,112. FEB. 17, 1972. (CHEM. ABSTR. 1972. 76:155086A.)

(372) BAKAN, J. A. [NATIONAL CASH REGISTER CO.]. METHYL CELLULOSE-DEXTRAN MICROCAPSULES. FRANCE 1,453,745. SEPT. 23, 1966. (CHEM. ABSTR. 1968. 69:3890A.)

(373) ------. [NATIONAL CASH REGISTER CO.]. MICROSCOPIC CAPSULES. U.S. 3,567,650. MARCH 2, 1971.

(374) CARLSON, L. J. [CROWN ZELLERBACH CORP.]. PROCESS FOR PREPARATION OF LEVOGLUCOSAN. U.S. 3,235,541. FEB. 15, 1966.

(375) COMMONWEALTH ENGINEERING CO. OF OHIO. PIGMENTED DEXTRAN. BRITAIN 807,234. JAN. 14, 1959.

(376) DENISTON, G. L. [ASSIGNEE B]. DEXTRAN UREA FORMALDEHYDE COMPOSITIONS. U.S. 2,674,584. APRIL 6, 1954.

(377) ------. [ASSIGNEE B]. PIGMENTED DEXTRAN AND METHOD OF PRODUCING IT. U.S. 2,725,303. NOV. 29, 1955.

(378) ------. [ASSIGNEE B]. PIGMENTED DEXTRAN. CANADA 595,593. APRIL 5, 1960.

(379) ------. [ASSIGNEE B]. PROCESS FOR PAINTS FROM DEXTRAN. GERMANY 1,102,383. NOV. 9, 1961.

(380) HILER, M. J. [ASSIGNEE B]. CIGARETTE FILTER TIPS FROM DEXTRAN. U.S. 2,768,913. OCT. 30, 1956.

(381) ------. [ASSIGNEE B]. DEXTRAN SOLUTIONS. U.S. 2,787,518. APRIL 2, 1957.

(382) ------. [ASSIGNEE B]. DEXTRAN IN AQUEOUS SOLUTION WITH BORON TRIFLUORIDE. CANADA 601,499. JULY 12, 1960.

(383) KARRIP, A. A. POLISHING COMPOSITIONS. U.S. 3,420,681. JAN. 7, 1969.

(384) KEARNEY, J. J. [DIAMOND ALKALI CO.]. POLYMERIZATION PROCESS UTILIZING DEXTRAN AS A PRIMARY DISPERSING AGENT. U.S. 2,857,367. OCT. 21, 1958.

(385) KONDO, A., M. KITAJIMA, AND S. MIYANO. [FUJI PHOTO FILM CO., LTD.]. ENZYME-CONTAINING MICROAGGLOMERATES. BRITAIN 1,286,095. AUG. 22, 1969. (CHEM. ABSTR. 1972. 77:154292Y.)

(386) LESINSKI, C. A., AND E. J. SULLIVAN. [DOW CHEMICAL CO.]. METHOD OF EMPLOYING DEXTRANS. U.S. 3,085,853. APRIL 16, 1963.

(387) MCNULTY, D. G., AND R. I. LEININGER. [DIAMOND ALKALI CO.]. POLYMERIZATION EMPLOYING POLYVINYL PYRROLIDONE IN COMBINATION WITH SECONDARY DISPERSANTS AS SUSPENSION STABILIZERS. U.S. 2,890,199. JUNE 9, 1959.

(388) MINGER, F. R., AND W. R. BENNETT. [DOW CHEMICAL CO.]. REMOVAL OF IMPURITIES FROM CAUSTIC SODA SOLUTIONS. U.S. 2,958,585. NOV. 1, 1960.

(389) NACK, H. R., AND L. J. NOVAK. [CHADELOID CORP.]. VARNISH REMOVER. U.S. 2,736,710. FEB. 28, 1956.

(390) NOVAK, L. J. [ASSIGNEE B]. PRESSURE-SENSITIVE ADHESIVE ARTICLE CONTAINING DEXTRAN. U.S. 2,855,925. OCT. 14, 1958.

(391) ------. [ASSIGNEE B]. PLASTIC MATERIALS COMPRISING DEXTRAN AND METHOD OF PREPARATION. CANADA 626,411. AUG. 29, 1961.

(392) ------. [ASSIGNEE B]. PRESSURE-SENSITIVE ADHESIVE ARTICLE CONTAINING DEXTRAN. CANADA 626,890. SEPT. 5, 1961.

(393) ------. [ASSIGNEE B]. RESINS COMPRISING POLYESTERS MODIFIED BY DEXTRAN AND A MONOETHYLENICALLY UNSATURATED MONOMER. CANADA 657,132. FEB. 5, 1963.

(394) PAN, S. C., AND J. L. LERNER. [OLIN MATHIESON CHEMICAL CORP.]. IMPROVED FERMENTATION PROCESS FOR PREPARATION OF EBURICOIC ACID. BRITAIN 951,490. MARCH 4, 1964.

(395) ROGERS, J. [ASSIGNEE B]. DEXTRAN-SYNTHETIC RESIN MANUFACTURE. BRITAIN 758,112. SEPT. 26, 1956.

(396) ROSENBERG, S., AND D. BANDEL. [AMERICAN MACHINE & FOUNDRY CO.]. SMOKING PRODUCT AND METHOD OF MANUFACTURE. U.S. 2,887,414. MAY 19, 1959.

(397) SCHOTT, H. [E.I. DU PONT DE NEMOURS & CO.]. PROCESS OF PREPARING AND EXTRUDING AN AQUEOUS GEL OF POLYTETRAFLUOROETHYLENE. U.S. 3,038,870. JUNE 12, 1962.

(398) TOULMIN, H. A., JR. [ASSIGNEE B]. DEXTRAN BATTERY SEPARATOR PLATE. U.S. 2,624,768. JAN. 6, 1953.

(399) ------. [ASSIGNEE B]. PAPER AND PAPER-LIKE MATERIALS HAVING A REMOISTENABLE ADHESIVE COATING. U.S. 2,768,096. OCT. 23, 1956.

(400) ------. [ASSIGNEE B]. MICROPOROUS SEPARATORS FOR STORAGE BATTERIES AND PROCESS FOR THEIR MANUFACTURE. GERMANY 1,047,890. APRIL 14, 1960.

(401) VOLCHENKO, M. F., AND N. G. VOZNAYA. [KIROVOGRAD INSTITUTE OF AGRICULTURAL EQUIPMENT ENGINEERING]. STABILIZATION OF AQUEOUS GRAPHITE SUSPENSION. U.S.S.R. 408,645. (CHEM. ABSTR. 1974. 81:68946R.)

(402) WENZELBERGER, E. P. [ASSIGNEE B]. MOLDING COMPOSITIONS COMPRISING DEXTRAN OR DERIVATIVE AND METHOD OF MOLDING. U.S. 2,826,557. MARCH 11, 1958.

(403) ------. [ASSIGNEE B]. POLYESTER MOLDING COMPOSITIONS COMPRISING DEXTRAN OR DERIVATIVE. BRITAIN 868,801. MAY 25, 1961.

(404) WITT, E. E., AND F. W. HOLT, JR. [ASSIGNEE B]. DEXTRAN BONE-GLUE ADHESIVES. U.S. 2,850,398. SEPT. 2, 1958.

(405) ------ AND F. W. HOLT, JR. [ASSIGNEE B]. DEXTRAN-SULFITE LIQUOR SOLIDS ADHESIVES. U.S. 2,933,405. APRIL 19, 1960.

(406) ------ AND F. W. HOLT, JR. [ASSIGNEE B]. DEXTRIN-DEXTRAN ADHESIVES. U.S. 2,933,407. APRIL 19, 1960.

(407) ------ AND F. W. HOLT, JR. [ASSIGNEE B]. IMPROVEMENTS IN OR RELATING TO ADHESIVES. BRITAIN 892,633. MARCH 28, 1962.*

(408) ------ AND F. W. HOLT, JR. [ASSIGNEE B]. DEXTRAN BONE-GLUE ADHESIVES. CANADA 644,040. JULY 3, 1962.

XXXIII. Food uses of dextrans and their derivatives

(409) BOHN, R. T. [R. K. LAROS CO.]. ADDITION OF DEXTRAN TO BREAD DOUGHS. U.S. 2,983,613. MAY 9, 1961.

(410) COMMONWEALTH ENGINEERING CO. OF OHIO. COVERINGS FOR FOOD PRODUCTS AND PROCESS OF MANUFACTURING SAME. FRANCE 1,188,399. SEPT. 22, 1959.

(411) CORMAN, J., H. M. TSUCHIYA, AND C. S. STRINGER. [ASSIGNEE A]. ENZYMATIC PREPARATION OF HIGH LEVULOSE FOOD ADDITIVES. U.S. 2,742,365. APRIL 17, 1956.

(412) DIENST, C. S., AND J. M. ATTEBERY. [EMERY CARLTON SWANSON]. PROCESS FOR SEPARATING PROTEIN FROM AQUEOUS SOLUTIONS CONTAINING DISSOLVED MATERIAL OF LOWER MOLECULAR WEIGHT USING A THIN BED OF MOLECULAR SIEVE MATERIAL. U.S. 3,547,900. DEC. 15, 1970.

(413) EAST ANGLIA CHEMICAL CO., LTD. IMPROVEMENTS IN OR RELATING TO THE PRODUCTION OF SUCROSE SYRUPS. BRITAIN 657,420. FEB. 29, 1948.

(414) HARRIS, S. R. [COLONIAL SUGAR REFINING CO., LTD.]. HIGH VISCOSITY SYRUP FROM SUCROSE. AUSTRALIA 411,213. APRIL 8, 1971. (CHEM. ABSTR. 1972. 76:61234V.)

(415) KRAJEWSKI, R. M. [DOW CHEMICAL CO.]. METHOD OF COATING FROZEN MEATS. U.S. 3,248,232. APRIL 26, 1966.

(416) LACHMANN, A. [AMERICAN SUGAR REFINING CO.]. BROWN SUGAR. U.S. 2,910,386. OCT. 27, 1959.

(417) LYCKEBY STARKELSEFORADLIN AKTIEBOLAGET. SORBITOL AND DEXTRAN SWEETENERS. BELGIUM 647,581. AUG. 31, 1964. (CHEM. ABSTR. 1965. 63:12240F.)

(418) MAHONEY, J. C. COMESTIBLE AND PROCESS FOR PREPARING SAME. U.S. 2,089,217. AUG. 10, 1937.

(419) MEITO SANGYO K.K. A PROCESS FOR PREPARING A NEW MILK DRINK. JAPAN 2881/61. APRIL 11, 1961.*

(420) MORGAN, A. I., JR., AND L. F. GINNETTE. [ASSIGNEE A]. DEHYDRATION OF FRUIT AND VEGETABLE JUICES. U.S. 2,955,943. OCT. 11, 1960.

(421) ------ AND L. F. GINNETTE. [ASSIGNEE A]. PRODUCTION OF CARBOHYDRATES IN READILY DISPERSIBLE FORM. U.S. 3,064,722. NOV. 20, 1962.

(422) ------ AND S. SCHWIMMER. [ASSIGNEE A]. PREPARATION OF DEHYDRATED FOOD PRODUCTS. U.S. 3,170,803. FEB. 23, 1965.

(423) NOVAK, L. J. [ASSIGNEE B]. FOOD FLAVOR-ENHANCING MATERIAL. U.S. 2,785,977. MARCH 19, 1957.

(424) ------. [MIDLAND CHEMICAL CORP.]. GELATIN-FIXED CITRUS OILS. U.S. 2,786,767. MARCH 26, 1957.

(425) ------. [ASSIGNEE B]. PRESERVATION OF FROZEN FOODS. U.S. 2,790,720. APRIL 30, 1957.

(426) ------. [MIDLAND CHEMICAL CORP.]. CONFECTION STOCK COMPRISING CARBOXYMETHYL DEXTRAN. U.S. 2,876,102. MARCH 3, 1959.

(427) ------. [MIDLAND CHEMICAL CORP.]. FONDANTS AND THE LIKE. U.S. 2,893,873. JULY 7, 1959.

(428) ------. [ASSIGNEE B]. DIET SUPPLEMENTS CONTAINING DEXTRAN. BRITAIN 830,951. MARCH 23, 1960.

(429) ------. [MIDLAND CHEMICAL CORP.]. CONFECTION STOCK COMPRISING CARBOXYMETHYL DEXTRAN. BRITAIN 841,914. JULY 20, 1960.

(430) ------. [MIDLAND CHEMICAL CORP.]. CONFECTION STOCK COMPRISING CARBOXYMETHYL DEXTRAN. CANADA 605,562. SEPT. 20, 1960.

(431) ------. [ASSIGNEE B]. DIETARY FACTOR AND WEIGHT CONTROLLING METHOD. CANADA 614,544. FEB. 14, 1961.

(432) REY, L. R., M. DOUSSET, AND F. CHAUFFARD. [NESTLE'S PRODUCTS LTD.]. FOOD OR OTHER COMPOSITE MATERIAL. BRITAIN 1,125,350. AUG. 28, 1968. (CHEM. ABSTR. 1969. 70:2597U.)

(433) SCHIERBAUM, F. PROCESS FOR THE PRODUCTION OF PREGELATINIZED STARCH FOR FOODSTUFFS. EAST GERMANY 38,076. APRIL 15, 1965.

(434) SENATORE, P. J. [CHAS. PFIZER AND CO., INC.]. STABILIZED MALTOL AND ETHYL MALTOL BY SPRAY-DRYING. U.S. 3,521,370. JULY 21, 1970.

(435) SMITH, T. A., T. F. MALONE, AND P. J. MECH. [MONSANTO CHEMICAL CO.]. CYCLAMATE-SACCHARIN SWEETENER WITH LESS BITTERNESS AND AFTERTASTE. BELGIUM 660,615. SEPT. 6, 1965. (CHEM. ABSTR. 1966. 64:1906D.)

(436) TOULMIN, H. A., JR. [ASSIGNEE B]. EDIBLE CONTAINER FOR ICE CREAM AND THE LIKE. U.S. 2,731,349. JAN. 17, 1956.

(437) ------. [ASSIGNEE B]. NORMALLY FOAM-PRODUCING BEVERAGES. U.S. 2,758,926. AUG. 14, 1956.

(438) ------. [ASSIGNEE B]. METHOD OF PRESERVING SHRIMP. U.S. 2,758,929. AUG. 14, 1956.

(439) ------. [ASSIGNEE B]. METHOD OF PRESERVING SHRIMP. U.S. 2,758,930. AUG. 14, 1956.

(440) ------. [MIDLAND CHEMICAL CORP.]. ICING COMPOSITIONS COMPRISING A CARBOXYMETHYL DEXTRAN AND METHOD OF PRODUCING THE SAME. U.S. 2,789,911. APRIL 23, 1957.

(441) ------. [ASSIGNEE B]. METHOD OF PRESERVING FOOD PRODUCTS. U.S. 2,790,721. APRIL 30, 1957.

(442) ------. [MIDLAND CHEMICAL CORP.]. THICKENED FRUIT COMPOSITION COMPRISING CARBOXYMETHYL DEXTRAN. U.S. 2,813,797. NOV. 19, 1957.

(443) ------. [ASSIGNEE B]. DRY PUDDING MIX COMPRISING CARBOXYMETHYL DEXTRAN. U.S. 2,818,343. DEC. 31, 1957.

(444) ------. [ASSIGNEE B]. STABILIZED AND BODIED ICE CREAM. U.S. 2,823,128. FEB. 11, 1958.

(445) ------. [MIDLAND CHEMICAL CORP.]. STABILIZED BODIED MILK AND FROZEN MILK PRODUCTS COMPRISING CARBOXYMETHYL DEXTRAN. U.S. 2,834,684. MAY 13, 1958.

(446) ------. [UNION CARBIDE CORP.]. BEVERAGE CONCENTRATES AND SYRUPS. U.S. 2,864,707. DEC. 16, 1958.

(447) ------. [ASSIGNEE B]. NORMALLY FOAM-PRODUCING BEVERAGES. CANADA 573,274. MARCH 31, 1959.

(448) ------. [ASSIGNEE B]. GUM CONFECTIONS AND MANUFACTURE THEREOF. U.S. 2,938,797. MAY 31, 1960.

(449) ------. [ASSIGNEE B]. ICING COMPOSITION. U.S. 2,938,798. MAY 31, 1960.

(450) ------. [ASSIGNEE B]. DRY PUDDING COMPOSITION. U.S. 2,938,799. MAY 31, 1960.

(451) ------. [ASSIGNEE B]. DRY PUDDING MIX COMPRISING CARBOXYMETHYL DEXTRAN. CANADA 605,568. SEPT. 20, 1960.

(452) ------. [ASSIGNEE B]. DRY PUDDING MIX COMPRISING CARBOXYMETHYL DEXTRAN. BRITAIN 871,478. JUNE 28, 1961.*

(453) ------. [MIDLAND CHEMICAL CORP.]. STABILIZED BODIED MILK AND FROZEN PRODUCTS COMPRISING CARBOXYMETHYL DEXTRAN. CANADA 625,241. AUG. 8, 1961.

(454) WADSWORTH, D. V., AND M. F. HUGHES. [REFINED SYRUPS AND SUGARS INC.]. SUGAR SIRUP AND PROCESS. U.S. 2,409,816. OCT. 22, 1946.

OTHER PATENTS: 147 148

XXXIV. Pharmaceutical applications of dextrans and their derivatives

A. Dextrans

Used for infusion; preparation, stabilization, and prolonging effect of biologically active substances; and covalent bonding to enzymes and proteins.

(455) AKTIEBOLAGET LEO. METHOD FOR PRODUCING PREPARATIONS WITH PROTRACTED ACTH EFFECT AND SUCH PREPARATIONS. BRITAIN 761,061. NOV. 7, 1956.

(456) AKTIEBOLAGET PHARMACIA. FIXATION OF BIOPOLYMERS, AS PEPTIDES, ENZYMES, ANTIBODIES OR ANTIGENS, BY COVALENT BONDING WITH POLYSACCHARIDES. FRANCE 1,584,535. DEC. 26, 1969. (CHEM. ABSTR. 1970. 73:111203V.)

(457) ARAKAWA, S., AND K. SHIBUSAWA. [WAKUNAGA PHARMACEUTICAL CO., LTD.]. INFUSION MATERIAL AS BLOOD SUBSTITUTE AND PLASMA EXPANDERS. GERMANY (OFFEN.) 2,358,123. JUNE 12, 1974. (CHEM. ABSTR. 1975. 82:26149Y.)

(458) ARIMOTO, Y., AND S. UEDA. [SANKYO CO., LTD.]. PHOTOSTABILIZED COBALAMIN INJECTION. JAPAN 71 15,320. APRIL 24, 1971. (CHEM. ABSTR. 1971. 75:52821M.)

(459) AXEN, R. E. A. V., J. O. PORATH, AND E. S. ERNBACH. METHOD OF BINDING WATER-SOLUBLE PROTEINS AND WATER-SOLUBLE PEPTIDES TO WATER-INSOLUBLE POLYMERS USING CYANOGEN HALIDE. U.S. 3,645,852. FEB. 2, 1972.

(460) BRANDON, F. B., AND A. R. TAYLOR. [PARKE, DAVIS & CO.]. ANTIGEN PRODUCTS AND MEANS FOR PRODUCING THE SAME. U.S. 3,105,012. SEPT. 24, 1963.

(461) CHIBATA, I., T. TOSA, AND T. MORI. [TANABE SEIYAKU CO., LTD.]. STABLE IMMOBILIZED ASPARGINASE. JAPAN (KOKAI) 74 42,880. APRIL 22, 1974. (CHEM. ABSTR. 1974. 81:116,662F.)

(462) CIBA SOCIETA ANONYME. A PROCESS FOR THE OBTAINING OF A NEW PROTEIN. ARGENTINA 142,527. MAY 5, 1965.*

(463) ------. PROTEIN. FRANCE 1,405,243. JULY 9, 1965.*

(464) ------. PREPARATION OF BACILLUS CALMETTE GUERIN VACCINE. BELGIUM 664,429. NOV. 25, 1965. (CHEM. ABSTR. 1967. 66:5790M.)

(465) FRANKS, N. E. [PROCTER AND GAMBLE CO.]. ENZYMICALLY ACTIVE COMPOSITION COMPRISING AN INSOLUBILIZED PROTEASE COVALENTLY BOUND TO A WATER-INSOLUBLE, POLYANHYDROGLUCOSE-BASED MATRIX. FRANCE 2,115,709. AUG. 11, 1972. (CHEM. ABSTR. 1973. 74:60063T.)

(466) FRITSCH, W., W. HAEDE, H. SCHERER, AND W. KEMPE. [FARBWERKE HOECHST AKT.-GES.]. PROCESS FOR STABILIZING ANIONIC AND CATIONIC ESTER SALTS OF 21-HYDROXY-20-KETO-STEROIDS IN AN AQUEOUS SOLUTION. CANADA 663,613. MAY 21, 1963.

(467) GINGER, L. G., AND A. N. MATHER. [BAXTER LABORATORIES, INC.]. STREPTOKINASE BINDING TO CARBOHYDRATES. GERMANY (OFFEN.) 2,059,165. JUNE 9, 1971. (CHEM. ABSTR. 1971. 75:95019Y.)

(468) ------ AND A. N. MATHER. [BAXTER LABORATORIES, INC.]. STREPTOKINASE CHEMICALLY BONDED TO A CARBOHYDRATE MATRIX. U.S. 3,639,213. FEB. 1, 1972.

(469) HANUSHEWSKY, M. [BAXTER LABORATORIES, INC.]. DEXTRAN-BOUND ENZYMES. GERMANY (OFFEN.) 2,423,831. DEC. 12, 1974. (CHEM. ABSTR. 1975. 82:151413F.)

(470) ------. [BAXTER LABORATORIES, INC.]. BINDING ENZYMES TO ACTIVATED WATER-SOLUBLE CARBOHYDRATES. U.S. 3,876,501. APRIL 8, 1975.

(471) HEISS, F. BLOOD PRESERVES OF LOW LEUCOCYTE AND THROMBOCYTE CONTENT. GERMANY (OFFEN.) 2,127,408. JAN. 4, 1973. (CHEM. ABSTR. 1973. 78:82617D.)

(472) HOYT, J. W. [UNITED STATES DEPT. OF THE NAVY]. BLOOD TRANSFUSION FLUIDS HAVING REDUCED TURBULENT FRICTION PROPERTIES. U.S. 3,590,124. JUNE 29, 1971.

(473) ISBELL, H. S. [UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF COMMERCE]. PROCESS FOR LABELLING POLYSACCHARIDES WITH C14 AND PRODUCTS RESULTING THEREFORM. U.S. 2,653,931. SEPT. 29, 1953.

(474) JANISZEWSKI, E. STABLE, AQUEOUS, COLLOIDAL SOLUTIONS OF WATER-INSOLUBLE VITAMINS. POLAND 40,968. APRIL 1, 1958. (CHEM. ABSTR. 1960. 54:13563D.)

(475) JOHANNSON, H. I., H. K. LUNDGREEN, AND M. K. JOUSTRA. [PHARMACIA FINE CHEMICALS AB]. BEAD-LIKE COMPOSITIONS BASED ON A CYANOGEN HALIDE-ACTIVATED, WATER-INSOLUBLE POLYSACCHARIDE OR POLYSACCHARIDE DERIVATIVE. GERMANY (OFFEN.) 2,317,352. OCT. 25, 1973. (CHEM. ABSTR. 1974. 80:147153N.)

(476) JOHNSON, R. H. [UPJOHN CO.]. STABLE HYDROCORTISONE SOLUTION. U.S. 2,793,159. MAY 21, 1957.

(477) KAGEDAL, S. L., AND S. H. J. AKERSTROM. [AKTIEBOLAGET PHARMACIA]. BINDING BIOLOGICALLY ACTIVE COMPOUNDS TO POLYSACCHARIDES. GERMANY (OFFEN.) 1,815,332. JULY 24, 1969.

(478) ------ AND S. H. J. AKERSTROM. [AKTIEBOLAGET PHARMACIA]. METHOD OF BINDING BY COVALENT BONDS, PROTEINS AND POLYPEPTIDES TO POLYMERS USING CYANATES. U.S. 3,788,948. JAN. 29, 1974.

(479) KIMURA, K., M. YAMAMOTO, AND Y. TANAKA. [KYOWA FERMENTATION INDUSTRY CO., LTD.]. ISOLATION OF TANNASE. JAPAN 73 35,478. OCT. 27, 1973. (CHEM. ABSTR. 1974. 81:89814M.)

(480) KYOWA HAKKO KOGYO CO., LTD. WATER SOLUBLE BACTERIAL ACYLASES. CANADA 787,393. JUNE 11, 1968. MICROBIOL. ABSTR. 1968. SEC. A, 4(3):A1008.)

(481) LANDSBERGER, A., AND J. STEIN. ANTICANCER AGENT. GERMANY 1,237,730. MARCH 30, 1967. (CHEM. ABSTR. 1967. 67:67566R.)

(482) MICHAEL, S. E., AND G. W. TUNNAH. [CROOKES LABORATORIES LTD.]. IMPROVEMENTS IN AND RELATING TO THE STABILITY OF ANTIHEMOPHILIC GLOBULIN (FACTOR VIII). BRITAIN 941,019. NOV. 6, 1963.

(483) MIZUTANI, A. [MEITO SANGYO CO., LTD.]. THIOL STABILIZERS CONTAINING GLUTATHIONE-DEXTRAN COMPLEXES. JAPAN (KOKAI) 75 57,979. MAY 20, 1975. (CHEM. ABSTR. 1975. 83:93413P.)

(484) ------. [MEITO SANGYO CO., LTD.]. REDUCED-TYPE GLUTATHIONE MOLECULAR COMPOUNDS WITH DEXTRAN. JAPAN (KOKAI) 75 59,479. MAY 22, 1975. (CHEM. ABSTR. 1975. 83:164585J.)

(485) MOLTENI, L., E. ANTONINI, AND E. ORADI. [ZAMBELETTI, DR. L., S.P.A.]. VITAMIN B12 DERIVATIVES. GERMANY (OFFEN.) 2,415,755. OCT. 17, 1974.

(486) ------, E. ANTONINI, AND A. TREBBI. [ZAMBELETTI, DR. L., S.P.A.]. AMINO GROUP-CONTAINING PHARMACEUTICALS OF PROLONGED ACTION. GERMANY (OFFEN.) 2,413,512. OCT. 24, 1974. (CHEM. ABSTR. 1975. 82:77105P.)

(487) MUGGLETON, P. W., AND J. UNGAR. [GLAXO LABORATORIES LTD.]. USE OF DEXTRAN IN FREEZE-DRYING PROCESS. U.S. 2,908,614. OCT. 13, 1959.

(488) ------ AND J. UNGAR. [GLAXO LABORATORIES LTD.]. FREEZE-DRYING PROCESS FOR BIOLOGICAL PRODUCTS. GERMANY 1,028,739. OCT. 9, 1965.

(489) NARANG, S. A., AND J. J. MICHNIEWICZ. [NATIONAL RESEARCH COUNCIL, CANADA]. AROMATIC DEXTRAN DERIVATIVES AS ION-EXCHANGE RESINS. CANADA 916,694. DEC. 12, 1972.

(490) ------ AND J. J. MICHNIEWICZ. [CANADIAN PATENTS AND DEVELOPMENT LTD.]. AROMATIC DEXTRAN DERIVATIVES. U.S. 3,865,807. FEB. 11, 1975.

(491) POMMERENING, K., H. HONECK, AND J. BEHLKE. WATER-SOLUBLE POLYMER-BOUND METHEMOGLOBIN. EAST GERMANY 107,793. AUG. 12, 1974. (CHEM. ABSTR. 1975. 82:73490N.)

(492) RHODE, W., AND A. LEZIUS. [MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSHAFTEN E.V.]. PURIFICATION OF THYMIDINE KINASE. U.S. 3,791,928. FEB. 12, 1974.

(493) RUDEL, M., A. GRABERT, P. HEILEMANN, AND P. ROTH. WATER-INSOLUBLE, BIOLOGICALLY-ACTIVE COMPOUNDS BY COVALENT COUPLING OF BIOLOGICALLY-ACTIVE SUBSTANCE, LIKE PROTEIN, TO INSOLUBLE CARRIER MATERIAL. EAST GERMANY 101,414. NOV. 5, 1973. (CHEM. ABSTR. 1975. 82:1653V.)

(494) SATO, T., H. OZAWA, H. SHIMIZU, AND OTHERS. [TORAY INDUSTRIES, INC.]. INSULIN PREPARATION FOR EYE APPLICATION. JAPAN (KOKAI) 74 102,827. SEPT. 28, 1974. (CHEM. ABSTR. 1975. 82:129295X.)

(495) SAUNDERS, J. F. [UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF THE NAVY]. PROCESS FOR FREEZING BLOOD. U.S. 3,177,117. APRIL 6, 1965.

(496) SOUTH AFRICAN INVENTIONS DEVELOPMENT CORP. PRECIPITATION OF THE ORGANIC COLLOIDS. FRANCE (DPA) 1,350,895. DEC. 23, 1963.

(497) TAKEDA, Y., AND F. SUZUKI. [MEITO SANGYO CO., LTD.]. INSULIN-DEXTRAN COMPLEX OF PROTRACTED ACTIVITY. JAPAN (KOKAI) 73 04,623. JAN. 20, 1973. (CHEM. ABSTR. 1973. 78:115235H.)

(498) ------ AND F. SUZUKI. [MEITO SANGYO CO., LTD.]. INSULIN-DEXTRAN COMPLEX. JAPAN (KOKAI) 73 08,916. FEB. 3, 1973. (CHEM. ABSTR. 1973. 79:9908R.)

(499) THULIN, K. E. [AKTIEBOLAGET PHARMACIA]. WAY OF MAKING STABLE PENICILLIN SOLUTIONS WITH PROLONGED EFFECTIVENESS. SWEDEN 121,752. APRIL 1, 1948.

(500) VERMEHREN, T. L. M. PROCESS FOR PRODUCING INSULIN PREPARATIONS WITH DELAYED EFFECT. DENMARK 84,196. JAN. 6, 1958.

(501) ------. PROCESS FOR PRODUCING ADRENOCORTICOTROPIC-HORMONE PREPARATION WITH DELAYED ACTION. DENMARK 84,963. JUNE 2, 1958.

(502) ------. PROCESS FOR PRODUCING COMPOUNDS THAT CONTAIN ETHER BONDS FROM POLYSACCHARIDES AND AMINO ALCOHOLS. DENMARK 85,906. OCT. 20, 1958. (CHEM. ABSTR. 1959. 53:11261E.)

(503) WELLCOME FOUNDATION LTD. VACCINES AND THEIR PREPARATION. BELGIUM 622,212. MARCH 6, 1963.

(504) ------. IMPROVED VACCINES. BELGIUM 636,492. FEB. 24, 1964.

(505) WITTMANN, G., K. BAUER, AND M. MUSSGAY. [FARBENFABRIKEN BAYER AKT.-GES.]. DEAE-DEXTRAN AS ADJUVANTS FOR VACCINES FOR ACTIVE IMMUNIZATION. GERMANY (OFFEN.) 1,924,304. DEC. 17, 1970. (CHEM. ABSTR. 1971. 74:45606W.)

(506) ------, K. BAUER, AND M. MUSSGAY. [FARBENFABRIKEN BAYER AKT.-GES.]. DIETHYLAMINOETHYL DEXTRAN AS AN ADJUVANT FOR VACCINES FOR ACTIVE IMMUNIZATION. U.S. 3,632,741. JAN. 4, 1972.

OTHER PATENTS: 149 THROUGH 159 172 THROUGH 176 185 186 197 THROUGH 204 214 215 235 236 260 THROUGH 290

B. Cross-linked Dextran Gels

Used to separate and purify such biologically active substances as enzymes, hormones, and viruses.

(507) AKTIEBOLAGET PHARMACIA. METHOD FOR SEPARATING SUBSTANCES WITH DIFFERENT MOLECULAR SIZES FROM A SOLUTION. BRITAIN 865,265. APRIL 12, 1961.

(508) BAUMGARTEN, W., AND R. B. COLE. [MERCK AND CO., INC.]. STREPTOKINASE PURIFICATION PROCESS. U.S. 3,107,203. OCT. 15, 1963.

(509) BEHRINGWERKE AKT.-GES. PROCESS FOR PREPARATION OF STREPTOKINASE. BELGIUM 631,424. NOV. 18, 1963.

(510) ------. ISOLATION OF 1'ALPHA-ANTITRYPSIN. NETHERLANDS (APPLN.) 06622/64. DEC. 12, 1964.*

(511) ------. ISOLATION OF 1'ALPHA-ANTITRYPSIN. BELGIUM 649,238. DEC. 14, 1964.*

(512) BERGKVIST, R. [AKTIEBOLAGET ASTRA]. PROCESS FOR ISOLATING AND SEPARATING PROTEOLYTIC ENZYMES. U.S. 3,281,331. OCT. 25, 1966.

(513) BRISTOL-MYERS CO. A COMPLEX POLYSACCHARIDE FOR THERAPEUTIC USE AND PROCESS FOR ITS PREPARATION. BRITAIN 930,041. JULY 3, 1963.

(514) DANIELS, E. G., AND J. W. HINMAN. [UPJOHN CO.]. EXTRACTS OF MAMMALIAN KIDNEY. U.S. 3,282,788. NOV. 1, 1966.

(515) DE VRIES, J. W. [ORGANON, INC.]. PURIFICATION OF FAT MOBILIZING SUBSTANCES. U.S. 3,275,515. SEPT. 27, 1966.

(516) EPPSTEIN, S. H. [UPJOHN CO.]. PITUITARY GLAND EXTRACT AND PROCESS FOR ITS MANUFACTURE. U.S. 3,275,516. SEPT. 27, 1966.

(517) FLODIN, P. G. M., B. G. A. INGELMAN, AND A. H. B. SPROSS. [AKTIEBOLAGET PHARMACIA]. AGENT FOR IMPROVING THE UNPLEASANT TASTE OF IONIZABLE, ORGANIC THERAPEUTICALLY ACTIVE SUBSTANCES. SWEDEN 314,163. SEPT. 1, 1969. (CHEM. ABSTR. 1972. 77:143800M.)

(518) GOVERNORS OF THE UNIVERSITY OF TORONTO. PRODUCTION OF HIGH ACTIVITY FIBRINOLYTIC AGENTS. BRITAIN 1,022,026. MARCH 9, 1966.

(519) HEIMBURGER, N., R. SCHMIDTBERGER, AND G. SCHWICK. [BEHRINGWERKE AKT.-GES.]. PROCESS FOR PREPARING A STREPTOKINASE. U.S. 3,186,920. JUNE 1, 1965.

(520) KRUEGER, W., I. STOJANOW, AND G. MESSER. PURIFICATION OF RENNET ENZYME. EAST GERMANY 41,935. OCT. 15, 1965. (CHEM. ABSTR. 1966. 64:20110F.)

(521) MATHER, A. N., AND R. MAGUIRE. [BAXTER LABORATORIES, INC.]. METHOD OF PURIFICATION OF STREPTOKINASE. U.S. 3,255,094. JUNE 7, 1966.

(522) MESSING, R. A. [ETHICON INC.]. PROCESS FOR ENZYME PURIFICATION. U.S. 3,104,206. SEPT. 17, 1963.

(523) NOVO TERAPEUTISK LABORATORIUM A/S. HUMAN OR ANIMAL PLASMINOGEN. BELGIUM 663,155. OCT. 28, 1965.*

(524) ------. PRODUCTION OF HUMAN OR ANIMAL PLASMINOGEN. NETHERLANDS (APPLN.) 05,366/65. OCT. 28, 1965.*

(525) PARCELLS, A. J. [UPJOHN CO.]. PROCESS FOR THE PURIFICATION OF GROWTH HORMONE. U.S. 3,264,186. AUG. 2, 1966.

(526) SCHULTZE, H. E., AND N. HEIMBURGER. [BEHRINGWERKE AKT.-GES.]. PROCESS FOR ISOLATING 1'ALPHA-ANTITRYPSIN. U.S. 3,293,236. DEC. 20, 1966.

(527) TAISHO SEIYAKU K.K. PRODUCTION OF CELLULASE. JAPAN 2878/65. FEB. 15, 1965.*

(528) UPJOHN CO. PROTEIN EXTRACT (PREPARATION FROM PIG PITUITARY GLANDS). BELGIUM 663,093. OCT. 27, 1965.*

(529) ------. PROTEIN EXTRACT (PREPARATION FROM PIG PITUITARY GLANDS). NETHERLANDS (APPLN.) 6,505,373. OCT. 27, 1965.*

(530) WHITE, W. F. [ABBOTT LABORATORIES]. PURIFICATION OF UROKINASE. U.S. PATENT 3,256,158. JUNE 14, 1966.

C. Iron-Containing Compounds or Complexes of Dextrans, Dextran Derivatives, and Isomaltooligosaccharides

(531) AKTIEBOLAGET ASTRA, S. LINDVALL, AND K. G. HOEGBERG. IRON PREPARATIONS FOR INTRAMUSCULAR INJECTIONS. SOUTH AFRICA 648/61. MAY 16, 1962.

(532) AKTIESELSKABET ROSCO. FERRIC-DEXTRAN COMPLEXES. NETHERLANDS (APPLN.) 6,516,637. JUNE 30, 1966. (CHEM. ABSTR. 1967. 66:5767D.)

(533) ------. FERRIC DEXTRAN COMPLEXES AND SOLUTIONS THEREOF FOR THERAPEUTIC USE. BRITAIN (AMENDED) 1,088,829. DEC. 15, 1970. (CHEM. ABSTR. 1971. 75:133036M.)

(534) ALSOP, R. M., AND I. BREMNER. [FISONS PHARMACEUTICALS LTD.]. COMPLEXES OF IRON WITH HEPTONIC ACIDS FOR TREATMENT OF ANEMIA. SOUTH AFRICA 67 05,888. AOQIL 10, 1968. (CHEM. ABRSQ. 1969. 70:31679C.)

(535) ------ AND I., BREMNER. [FISONS PHARMACEUTICALS LTD.]. DEXTRAN-FERRIC HYDROXIDE COMPLEX FOR TREATING IRON DEFICIENCY ANEMIA. SOUTH AFRICA 68 02,742. OCT. 29, 1969. (CHEM. ABSTR. 1971. 74:103020P.)

(536) ------ AND I. BREMNER. [FISONS PHARMACEUTICALS LTD.]. IRON-DEXTRAN COMPLEX FOR TREATMENT OF IRON-DEFICIENCY ANEMIA. SOUTH AFRICA 68 02,743. OCT. 29, 1969. (CHEM. ABSTR. 1970. 72:121870D.)

(537) ------ AND I. BREMNER. [FISONS PHARMACEUTICALS LTD.]. MODIFIED DEXTRAN AND ITS DERIVATIVES. BRITAIN 1,199,951. JULY 22, 1970. (CHEM. ABSTR. 1970. 73:8942U.)

(538) ------ AND I. BREMNER. [FISONS PHARMACEUTICALS LTD.]. FERRIC HYDROXIDE DEXTRAN COMPLEXES USED IN PHARMACEUTICAL PREPARATIONS. BRITAIN 1,200,902. AUG. 5, 1970. (CHEM. ABSTR. 1970. 73:102052T.)

(539) ------ AND I. BREMNER. [FISONS PHARMACEUTICALS LTD.]. PHARMACEUTICAL COMPOSITIONS CONTAINING FERRIC HYDROXIDE COMPLEXED WITH DEXTRAN OR DEXTRIN HEPTONIC ACIDS. U.S. 3,639,588. FEB. 1, 1972.

(540) ASTRA APOTEKARNES AKTIEBOLAGET. NEW INJECTABLE IRON COMPOSITION. BELGIUM 609,537. APRIL 24, 1962.*

(541) BEHRENS, U., M. RINGPFEIL, AND A. GABERT. IRON PREPARATIONS FOR INJECTIONS. U.S.S.R. 145,986. APRIL 6, 1962. (CHEM. ABSTR. 1962. 57:9967E.)

(542) ------, M. RINGPFEIL, AND A. GABERT. PROCESS FOR PRODUCTION OF WATER-SOLUBLE IRON COMPLEX SALTS OF CARBOXYMETHYL DEXTRAN. EAST GERMANY 23,491. AUG. 6, 1962. (CHEM. ABSTR. 1966. 65:792D.)

(543) BENGER LABORATORIES, LTD. IMPROVED THERAPEUTIC PREPARATIONS OF IRON. INDIA 51,304. JULY 25, 1955.

(544) BERGER, C., AND L. J. NOVAK. [ASSIGNEE B]. PROCESS FOR THE PRODUCTION OF IRON-CONTAINING COMPLEX COMPOUNDS OF THE DEXTRAN GLYCOLIC ACID. GERMANY 1,065,402. MARCH 3, 1960.

(545) CHEMICALS INC. NEW THERAPEUTIC. BELGIUM 589,355. AUG. 1, 1960.*

(546) ------. COMPOSITION COMPRISING A FERRIC HYDROXIDE HYDROGENATED DEXTRAN COMPLEX AND PROCESS FOR PREPARING THE SAME. INDIA 71,198. AUG. 29, 1961.*

(547) ------. HYDROGENATED DEXTRANS AND COMPLEXES THEREOF AND PREPARATION OF SAME. BRITAIN 937,235. SEPT. 18, 1963.

(548) ------. PROCESS FOR PREPARATION OF A THERAPEUTICALLY ACTIVE COMPLEX OF FERRIHYDROXIDE WITH A HYDROGENATED DEXTRAN. NETHERLANDS 120,572. SEPT. 15, 1965.*

(549) CHRISTENSEN, H. M. [ROSKILDE MEDICAL CO., LTD.]. METHOD FOR PREPARING AN IRON PREPARATION FOR INJECTION. JAPAN 5,293('63). MAY 7, 1963.*

(550) ------. [ROSKILDE MEDICAL CO., LTD.]. PROCESS FOR PRODUCTION OF AN IRON-DEXTRAN PREPARATION SUITABLE FOR INJECTION. GERMANY (DAS) 1,149,137. MAY 22, 1963.

(551) COMMONWEALTH ENGINEERING CO. OF OHIO. CARBOXYMETHYL-DEXTRAN-IRON COMPLEXES. BELGIUM 571,966. JAN. 31, 1959.

(552) ------. AN IRON-CARBOXYALKYL DEXTRAN COMPLEX AND METHOD FOR THE PRODUCTION THEREOF. ITALY 603,423. APRIL 4, 1960.

(553) DE MUSQUIZ REUMERT, J., O. GYLLING-PEDERSEN, AND J. B. CASALS. [AKTIESELSKABET ROSCO]. IRON DEXTRAN COMPLEX AND PROCESS FOR MAKING SAME. U.S. 3,666,749. MAY 30, 1972.

(554) FEDORONKO, M., AND J. SUCHY. COLLOID SOLUTION OF FERRIC HYDROXIDE CONTAINING GLYCIDES. CZECHOSLOVAKIA 97,467. NOV. 15, 1960. (CHEM. ABSTR. 1961. 55:27795F.)

(555) FLORAMO, N. A. [CHEMICALS INC.]. IRON HYDROGENATED DEXTRAN. SOUTH AFRICA 1209/60. OCT. 18, 1960.

(556) ------. [CHEMICALS INC.]. IRON HYDROGENATED DEXTRAN. CANADA 632,769. DEC. 12, 1961.

(557) ------. [CHEMICALS INC.]. IRON HYDROGENATED DEXTRAN CANADA 623,770. DEC. 12, 1961.

(558) ------. [CHEMICALS INC.]. IRON HYDROGENATED DEXTRAN. U.S. 3,022,221. FEB. 20, 1962.

(559) ------. [CHEMICALS INC.]. IRON HYDROGENATED DEXTRAN. AUSTRALIA 241,768. NOV. 21, 1962.

(560) ------. METHOD FOR PREPARING IRON HYDROGENATED DEXTRAN. JAPAN 18,747('62). DEC. 14, 1962.*

(561) ------. [CHEMICALS INC.]. PROCESS FOR MAKING IRON HYDROGENATED DEXTRAN. U.S. 3,234,209. FEB. 8, 1966.

(562) ------. [CHEMICALS INC.]. PROCESS FOR THE PRODUCTION OF A THERAPEUTICAL PREPARATION CONSISTING OF A COLLOIDAL COMPLEX OF HYDROGENATED DEXTRAN AND FERRIC HYDROXIDE. GERMANY (DAS) 1,212,677. MARCH 17, 1966.

(563) FUJISHIMA, T., M. ICHIKAWA, M. SUZUKI, AND H. YOSHINO. [YAMASA SHOYU CO., LTD.]. HEMATINIC IRON CYTIDYLATE. JAPAN 72 00,299. JAN. 6, 1972. (CHEM. ABSTR. 1972. 76:131521N.)

(564) HECKEL, H. C. N., AND E. E. WITT. [CENTRAL PHARMACAL CO.]. WATER-SOLUBLE IRON COMPLEXES OF CARBOXYMETHYL DEXTRAN. U.S. 3,151,107. SEPT. 29, 1964.

(565) HERESEL, I., AND I. GERO. [CHINOIN GYOGYSZER ES VEGYESZETI TERMEKEK GYARA RT.]. IRON-CONTAINING PHARMACEUTICAL PREPARATION. HUNGARY 154,653. APRIL 30, 1968. (CHEM. ABSTR. 1968. 69:30114G.)

(566) HERB, J. R. [R. K. LAROS CO.]. DEXTRAN-IRON COMPLEX AND PROCESS FOR MAKING SAME. U.S. 2,885,393. MAY 5, 1959.

(567) ------. [R. K. LAROS CO.]. IRON-DEXTRAN COMPOSITION. CANADA 625,770. AUG. 15, 1961.

(568) JACKSON, J. C., JR. COMPOSITIONS FOR TREATING BURNED SKIN. U.S. 3,655,881. APRIL 11, 1972.

(569) JOHANSSON, H. L. E. [FISONS LTD.]. IRON DEXTRAN COMPLEXES FOR YOUNG PIGS. GERMANY (OFFEN.) 2,111,638. DEC. 2, 1971. (CHEM. ABSTR. 1972. 108283C.)

(570) KATSUI, G., T. TAKEBE, AND J. FUJITA. [EISAI CO., LTD.]. COLLOIDAL SOLUTIONS OF METALS AND DEXTRAN FOR INJECTION. JAPAN 5598('59). JUNE 29, 1959. (CHEM. ABSTR. 1959. 53:22763D.)

(571) ------. [EISAI CO., LTD.]. STABILIZATION OF DEXTRAN-IRON COLLOID. JAPAN 1998('61). MARCH 23, 1961. (CHEM. ABSTR. 1961. 55:21493I.)

(572) KITCHING, J. M. [CROOKES LABORATORIES LTD.]. INJECTABLE IRON COMPOSITIONS FOR TREATING IRON-DEFICIENCY ANEMIA. BRITAIN 1,258,566. DEC. 30, 1971. (CHEM. ABSTR. 1972. 76:76424F.)

(573) LABORATORIEN HAUSMANN AKT.-GES. PROCESS FOR THE PRODUCTION OF THERAPEUTICALLY APPLICABLE FERRO-POLYISOMALTOSATE COMPLEXES. AUSTRIA A1133/58. PUBLISHED DEC. 15, 1958.*

(574) ------. IRON-POLYISOMALTOSIDE COMPLEXES. BELGIUM 581,929. DEC. 15, 1959.*

(575) ------. METHOD OF PRODUCING A THERAPEUTICALLY ACTIVE FERRIC HYDROXYDEPOLYISOMALTOSE COMPLEX. DENMARK 93,262. APRIL 24, 1962.*

(576) LABORATORIEN HAUSMANN LTD. IMPROVEMENTS IN IRON POLYISOMALTOSE COMPLEXES FOR THERAPEUTICAL APPLICATION. INDIA 69,671. JAN. 12, 1961.*

(577) LEWIS, S. H., AND R. J. WESTFALL. [ARMOUR PHARMACEUTICAL CO.]. THERAPEUTIC IRON DEXTRAN PREPARATIONS. BRITAIN 1,017,422. JAN. 19, 1966.

(578) LINDVALL, S., AND K. G. HOEGBERG. [AKTIEBOLAGET ASTRA]. IRON PREPARATIONS FOR INTRA-MUSCULAR INJECTION. CANADA 659,420. MARCH 12, 1963.

(579) ------ AND K. G. HOEGBERG. [AKTIEBOLAGET ASTRA]. IRON PREPARATIONS FOR INTRAMUSCULAR INJECTION. U.S. 3,252,863. MAY 24, 1966.

(580) LONDON, E., AND G. D. TWIGG. [BENGER LABORATORIES LTD.]. PROCESS FOR MANUFACTURING A COLLOIDAL IRON PREPARATION. GERMANY 938,502. FEB. 2, 1956.

(581) ------ AND G. D. TWIGG. [BENGER LABORATORIES LTD.]. IMPROVED THERAPEUTIC PREPARATIONS OF IRON. BRITAIN 748,024. APRIL 18, 1956.

(582) ------ AND G. D. TWIGG. [BENGER LABORATORIES LTD.]. THERAPEUTIC PREPARATIONS OF IRON. U.S. 2,820,740. JAN. 21, 1958.

(583) ------ AND G. D. TWIGG. [BENGER LABORATORIES LTD.]. THERAPEUTIC PREPARATIONS OF IRON. CANADA 556,877. MAY 6, 1958.

(584) ------ AND G. D. TWIGG. [BENGER LABORATORIES LTD.]. THERAPEUTIC PREPARATIONS OF IRON. U.S. REISSUE 24,642. APRIL 28, 1959.

(585) MEITO SANGYO K.K. A METHOD FOR PRODUCING A STABLE COLLOIDAL DRUG OF IRON HYDROXIDE. JAPAN 21,548/61. FILED: MARCH 19, 1958.*

(586) MIHAILESCU, G., AND P. GHIMPU. [ROMANIA MEDICINE PLANT "BIOFARM"]. INJECTABLE IRON-DEXTRAN COMPLEX. ROMANIA 51,494. FEB. 27, 1969. (CHEM. ABSTR. 1969. 70:118122Q.)

(587) MIODUSZEWSKI, J. Z., M. H. MIODUSZEWSKA, AND A. KORNACKI. [KUTNOWSKIE ZAKLADY FARMACEUTYCZNE "POLFA"]. COMPLEX COMPOUNDS OF TRIVALENT IRON WITH HYDROGENATED DEXTRAN. POLAND 58,638. NOV. 29, 1969. (CHEM. ABSTR. 1970. 73:7211K.)

(588) ------, M. H. MIODUSZEWSKA, AND A. KORNACKI. [KUTNOWSKIE ZAKLADY FARMACEUTYCZNE "POLFA"]. MIXED COMPLEX COMPOUNDS OF TRIVALENT IRON WITH HYDROGENATED DEXTRAN AND CITRIC ACID OR ITS SALTS OF ALKALI METALS. POLAND 58,639. NOV. 29, 1969. (CHEM. ABSTR. 1970. 73:7237Y.)

(589) MUELLER, A., AND T. BERSIN. [LABORATORIEN HAUSMANN AKT.-GES.]. PROCESS FOR PRODUCTION OF IRON-POLYISOMALTOSE-COMPLEX. AUSTRIA 208,003. MARCH 10, 1960.

(590) ------ AND T. BERSIN. [HAUSMANN LABORATORIES LTD.]. PROCESS FOR THE MANUFACTURE OF IRON-POLYISOMALTOSE COMPLEX FOR THERAPEUTICAL PURPOSES. CANADA 623,411. JULY 4, 1961.

(591) ------ AND T. BERSIN. [HAUSMANN LABORATORIES LTD.]. IRON POLYISOMALTOSE COMPLEXES FOR THERAPEUTICAL APPLICATION. CANADA 623,412. JULY 4, 1961.

(592) ------ AND T. BERSIN. PROCESS FOR PREPARING AN IRON HYDROXIDE POLYISOMALTOSE COMPLEX AND THE RESULTING PRODUCT. U.S. 3,100,202. AUG. 6, 1963.

(593) ------ AND T. BERSIN. [LABORATORIEN HAUSMANN AKT.-GES.]. PROCESS FOR THE PRODUCTION OF THERAPEUTICALLY APPLICABLE IRON PREPARATIONS. SWITZERLAND 370,194. AUG. 15, 1963.

(594) ------ AND T. BERSIN. [LABORATORIEN HAUSMANN AKT.-GES.]. METHOD FOR PRODUCTION OF FERRIC-DEXTRAN-COMPLEX COMPOUNDS TO BE USED AS THERAPEUTICS. GERMANY 1,172,250. JUNE 18, 1964.*

(595) ------ AND T. BERSIN. [LABORATORIEN HAUSMANN AKT.-GES.]. IMPROVEMENTS IN OR RELATING TO THERAPEUTIC IRON PREPARATION. BRITAIN 985,206. MARCH 3, 1965.*

(596) ------ AND T. BERSIN. [LABORATORIEN HAUSMANN AKT.-GES.]. PROCESS FOR PRODUCTION OF NON-IONIC FERRIC HYDROXIDE-DEXTRAN-COMPLEXES FOR THERAPEUTICAL USE. GERMANY 1,196,629. JULY 15, 1965.*

(597) NOVAK, L. J. [ASSIGNEE B]. CARBOXYMETHYL DEXTRAN-IRON COMPLEXES. U.S. 2,856,398. OCT. 14, 1959.

(598) ------. [ASSIGNEE B]. PREPARATION OF CARBOXYMETHYL DEXTRAN-IRON COMPLEXES. U.S. 3,000,872. SEPT. 19, 1961.

(599) ------. [ASSIGNEE B]. CARBOXYMETHYL DEXTRAN-IRON COMPLEXES. BRITAIN 891,769. MARCH 21, 1962.

(600) ROCADOR, S. A. [SOCIEDAD QUIMICO FARMACEUTICA DE LOS ESTABLECIMIENTOS ROCAFORT DORIA, SOCIEDAD ANON.]. COLLOIDAL FERRIC OXIDE FOR INTRAMUSCULAR INJECTION. SPAIN 248,865. APRIL 25, 1959. (CHEM. ABSTR. 1960. 54:25605I.)

(601) ------. PROCESS FOR THE PREPARATION OF A COMPLEX OF IRON OXIDE AND DEXTRANIC ACIDS. SPAIN 282,099. NOV. 10, 1962.*

(602) ROSKILDE MEDICAL CO. LTD. METHOD FOR THE PRODUCTION OF AN IRON PREPARATION FOR INJECTION. INDIA 69,170. MARCH 23, 1961.*

(603) SUMI, Y., AND T. MATSUKI. [WAKAMOTO PHARMACEUTICAL CO., LTD.]. STABILIZATION OF COENZYME B12 IN WATER. JAPAN (KOKAI) 74 00,418. JAN. 5, 1974. (CHEM. ABSTR. 1974. 80:112620K.)

(604) SYNOWIEDZKI, Z. [INSTYTUT WETERYNARII ZAKLAD TECHNOLOGII I KONTROLI LEKOW WETERYNARYJNYCH]. COMPLEX COMPOUNDS OF IRON WITH CARBOHYDRATES. POLAND 45,026. OCT. 10, 1961. (CHEM. ABSTR. 1962. 57:9966H.)

(605) TABE, H. [TAKEDA CHEMICAL INDUSTRIES, LTD.]. DEXTRAN COMPOUND WITH IRON. JAPAN 13,098('61). APPL. SEPT. 26, 1956. (CHEM. ABSTR. 1962. 56:4878H.)

(606) ------. [TAKEDA PHARMACEUTICAL INDUSTRIES, LTD.]. IRON COMPOUND WITH DEXTRAN. JAPAN 7500('60). JUNE 20, 1960. (CHEM. ABSTR. 1961. 55:5880C.)

(607) WESTFALL, R. J., AND S. H. LEWIS. [ARMOUR PHARMACEUTICAL CO.]. THERAPEUTIC IRON-DEXTRAN PREPARATIONS. U.S. 3,093,545. JUNE 11, 1963.

(608) YAMADA, Y., AND M. ABE. [FERMENTATION RESEARCH INSTITUTE INC.]. DEXTRAN-IRON. JAPAN 17,847('61). SEPT. 29, 1961. (CHEM. ABSTR. 1962. 56:14745B.)

D. Compounds or Complexes of Dextran or Dextran Derivatives Containing Metals Other Than Iron

(609) FLODIN, P. G. M., J. A. O. JOHANSSON, AND H. L. E. JOHANSSON. [AKTIEBOLAGET PHARMACIA]. CALCIUM SALT OF DEXTRAN FOR TREATING CATTLE DELIVERY PARESIS. U.S. 3,262,847. JULY 26, 1966.

(610) ------ AND J. A. O. JOHANSSON. [AKTIEBOLAGET PHARMACIA]. CALCIUM SALTS OF CARBOXYMETHYL DEXTRAN WITH A DEXTRAN AVERAGE MOLECULAR WEIGHT NOT EXCEEDING 10,000. SWEDEN 300,106. APRIL 8, 1968. (CHEM. ABSTR. 1973. 78:18005A.)

(611) FORD, M. D., AND L. J. NOVAK. [CENTRAL PHARMACAL CO.]. CALCIUM SUBSTITUTION PRODUCTS OF DEXTRAN. U.S. 2,996,496. AUG. 15, 1961.

(612) FOWLER, F., AND L. GOLBERG. [BENGER LABORATORIES LTD.]. ANTIMONY PREPARATIONS. U.S. 3,085,943. APRIL 16, 1963.

(613) GIBBONS, R. A. [NATIONAL RESEARCH DEVELOPMENT CORP.]. CALCIUM DERIVATIVES OF PARTIALLY OXIDIZED POLYSACCHARIDES IN THE TREATMENT OF HYPOCALCEMIA. BRITAIN 1,137,540. DEC. 27, 1968. (CHEM. ABSTR. 1969. 70:71084M.)

(614) GOLBERG, L., AND F. FOWLER. [BENGER LABORATORIES LTD.]. IMPROVED THERAPEUTIC PREPARATIONS OF ANTIMONY. SOUTH AFRICA 3104/60. JAN. 4, 1961.

(615) ------ AND F. FOWLER. [BENGER LABORATORIES LTD.]. IMPROVED THERAPEUTIC PREPARATIONS OF ANTIMONY. BRITAIN 895,391. MAY 2, 1962.

(616) GROVES, J. J. [BOOTS PURE DRUG CO., LTD.]. NEW PARASITICIDAL COMPOUNDS. SOUTH AFRICA 1,539/63. OCT. 30, 1963.

(617) ------. [BOOTS PURE DRUG CO., LTD.]. NEW PARASITICIDAL COMPOUNDS. BRITAIN 959,962. JUNE 3, 1964.

(618) MIODUSZEWSKI, J. Z., AND M. H. MIODUSZEWSKA. [KUTNOWSKIE ZAKLADY FARMACEUTYCZNE "POLFA"]. COPPER COMPLEXES OF CARBOXYMETHYL DEXTRAN. POLAND 55,273. APRIL 25, 1968. (CHEM. ABSTR. 1969. 70:109159E.)

(619) ------ AND M. H. MIODUSZEWSKA. [KUTNOWSKIE ZAKLADY FARMACEUTYCZNE "POLFA"]. COBALT COMPLEXES OF CARBOXYMETHYL DEXTRAN. POLAND 55,274. APRIL 25, 1968. (CHEM. ABSTR. 1969. 70:109160Y.)

(620) MORII, E., T. NUMASAWA, K. IWATA, AND OTHERS. [MEITO SANGYO CO., LTD.]. ALUMINUM COMPLEXES OF POLYSACCHARIDE SULFATES. GERMAN (OFFEN.) 1,916,535. NOV. 6, 1969. (CHEM. ABSTR. 1970. 72:35780T.)

(621) ------, T. NUMASAWA, K. IWATA, AND OTHERS. [MEITO SANGYO CO., LTD.]. ANTIULCER CARBOXYMETHYL DEXTRAN ALUMINUM. JAPAN 72 00,300. JAN 6, 1972. (CHEM. ABSTR. 1972. 76:131522P.)

(622) ------, C. NUMAZAWA, K. IWATA, AND OTHERS. [MEITO SANGYO CO., LTD.]. WATER-SOLUBLE DEXTRAN SULFURIC ESTER CONTAINING ALUMINUM. JAPAN 72 46,792. NOV. 25, 1972. (CHEM. ABSTR. 1973. 79:146809Y.)

(623) VERMEHREN, T. L. M. PROCESS FOR PRODUCIING COBALT PREPARATIONS FOR INJECTION. DENMARK 84,923. MAY 27, 1958.

OTHER PATENTS: 33 THROUGH 36 226 257 306 THROUGH 308 313 335 942 952

E. Dextran Phosphates

(624) BEHRENS, U., M. RINGPFEIL, AND A. GABERT. [VEB SERUM-WERK BERNBURG]. METHOD FOR THE PRODUCTION OF DEXTRAN PHOSPHORIC ACID ESTER. EAST GERMANY 24,814. MARCH 1, 1963.

(625) ------, M. RINGPFEIL, AND A. GABERT. PROCESS FOR PRODUCTION OF DEXTRAN DERIVATIVES. EAST GERMANY 25,156. APRIL 22, 1963.

(626) ------, M. RINGPFEIL, AND A. GABERT. [VEB SERUM-WERK BERNBURG]. PROCESS FOR THE PRODUCTION OF DEXTRAN PHOSPHATE. GERMANY (DAS) 1,149,702. JUNE 6, 1963.

(627) GALLO, A. [SOCIETA FARMACEUTICI ITALIA]. PROCESS FOR PRODUCTION OF PHOSPHORIC ESTERS OF DEXTRAN, ANTILIPEMIC AND NOT ANTICOAGULANT. BELGIUM 549,700. NOV. 16, 1956.

(628) ------. [SOCIETA FARMACEUTICI ITALIA]. PROCESS FOR MANUFACTURE OF SODIUM SALTS OF DEXTRAN-PHOSPHORIC ACID-ESTERS. GERMANY 1,040,013. MARCH 19, 1959.

(629) ------. [SOCIETA FARMACEUTICI ITALIA]. PHOSPHORIC ESTERS OF DEXTRAN AS NONANTICOAGULANT ANTI-CHOLESTEREMICS AND PROCESS FOR THEIR PREPARATION. CANADA 613,126. JAN. 24, 1961.

(630) SOCIETA FARMACEUTICI ITALIA. PHOSPHORIC ESTERS OF DEXTRAN AND SALTS THEREOF AND PROCESS FOR THEIR PREPARATION. BRITAIN 800,484. AUG. 27, 1958.

(631) SUZUKI, S., M. SUZUKI, AND T. MATSUMOTO. [KOWA CO., LTD.]. POLYSACCHARIDES BONDED WITH PHOSPHORIC ACID AND FATTY ACID ESTERS. JAPAN (KOKAI) 75 54,685. MAY 14, 1975. (CHEM. ABSTR. 1975. 83:164513J.)

OTHER PATENTS: 639 641 803 804

F. Dextran Sulphates

Production and applications.

(632) BARNES, W. A., H. H. KUS, AND S. F. REDO. [CORNELL RESEARCH FOUNDATION, INC.]. DEXTRAN SULPHATE TREATMENT OF PEPTIC ULCERS. U.S. 3,487,150. DEC. 30, 1965.

(633) BEHRENS, U., M. RINGPFEIL, AND A. GABERT. [VEB SERUM-WERK BERNBURG]. PROCESS FOR THE PRODUCTION OF SODIUM SALTS OF DEXTRAN SULPHURIC ACID ESTERS INHIBITING COAGULATION OF BLOOD. GERMANY 1,152,396. APRIL 30, 1964.

(634) BROWN, G. R. [MALLINCKRODT CHEMICAL WORKS]. BARIUM SULFATE AND LOW VISCOSITY MONOSACCHARIDE POLYMER X-RAY CONTRAST MEDIA. U.S. 3,236,735. FEB. 22, 1966.

(635) CHUGAI SEIYAKU K.K. SULPHATES OF POLYSACCHARIDES. BELGIUM 612,153. APRIL 16, 1962.*

(636) ------. SULFATES OF SLIGHTLY POLYMERIZED POLYSACCHARIDES. FRANCE (DPA) MI,714. FEB. 25, 1963.

(637) ------. PROCESS FOR THE PREPARATION OF SULPHATES OF LIGHTLY POLYMERISED POLYSACCHARIDES. NETHERLANDS (APPLN.) 273,016. SEPT. 10, 1964.*

(638) COMMONWEALTH ENGINEERING CO. OF OHIO. SULPHURIC ESTERS OF DEXTRANIC ACID. BELGIUM 577,947. AUG. 16, 1959.*

(639) DIAMANTSTEIN, T., U. SAAR, K. MENGEL, AND M. TOEPERT. [SCHERING A.-G.]. INHIBITION OF THE IMMUNOSUPPRESSIVE ACTIVITY OF CORTICOSTEROIDS BY POLYANIONS. GERMANY (OFFEN.) 2,201,350. JULY 26, 1973. (CHEM. ABSTR. 1973. 79:96963W.)

(640) GROENWALL, A. J. T., B. G. A. INGELMAN, AND H. MOSIMANN. COMPOUNDS INHIBITING THE COAGULATION OF BLOOD. SWEDEN 118,014. JAN. 28, 1947. (CHEM. ABSTR. 1947. 41:6023F.)

(641) HEROLD, M., J. HOFMAN, P. MALEK, AND OTHERS. MEDICINAL PREPARATIONS WITH INCREASED FACULTY TO ENTER THE LYMPHATIC SYSTEM. CZECHOSLOVAKIA 90,981. JULY 15, 1959. (CHEM. ABSTR. 1960. 54:14594D.)

(642) HOFFMANN - LA ROCHE & CO. AKT.-GES. PROCESS FOR PREPARATION OF POLYSACCHARIDE POLYSULFONIC ACID ESTERS. SWITZERLAND 326,792. FEB. 15, 1958. (CHEM. ABSTR. 1958. 52:18245B.)

(643) INGELMAN, B. G. A., AND O. MARTENSSON. [AKTIEBOLAGET PHARMACIA]. SULFURIC ACID ESTERS OF POLYSACCHARIDES. SWEDEN 165,090. OCT. 21, 1958. (CHEM. ABSTR. 1960. 54:5494H.)

(644) JAMES, A. E., AND C. R. RICKETTS. [NATIONAL RESEARCH DEVELOPMENT CORP.]. IMPROVEMENTS RELATING TO THE MANUFACTURE OF SULFURIC ESTERS OF DEXTRAN. BRITAIN 715,821. SEPT. 22, 1954.

(645) ------ AND C. R. RICKETTS. [NATIONAL RESEARCH DEVELOPMENT CORP.]. FRACTIONAL PRECIPITATION OF DEXTRAN SULPHATE. CANADA 551,689. JAN. 14, 1958.

(646) ------ AND C. R. RICKETTS. [NATIONAL RESEARCH DEVELOPMENT CORP.]. PROCESS FOR MANUFACTURING A DEXTRAN SULFATE SUITABLE FOR THERAPEUTIC PURPOSES. GERMANY 970,763. OCT. 30, 1958.

(647) KIGASAWA, K., H. MINEHARA, AND S. SAITO. [GRELAN PHARMACEUTICAL CO., LTD.]. BASIC COMPLEX MEDICINE WITH DEXTRAN SULFATE. JAPAN (KOKAI) 73 18,415. MARCH 8, 1973. (CHEM. ABSTR. 1973. 79:57671E.)

(648) MEITO SANGYO K.K. ENTERIC-COATED TABLETS OF DEXTRAN SULPHATE ESTER AND METHOD OF PREPARATION THEREOF. BRITAIN 953,626. MARCH 25, 1964.

(649) ------. METHOD FOR PREPARATION OF ANTILIPEMIC ALKALI SALTS OF DEXTRAN SULFURIC ACID ESTERS. GERMANY (DAS) 1,242,202. JUNE 15, 1967. (STAERKE 1969. 21(11):302.)

(650) MORII, E., S. JASUE, K. IWATA, AND Y. TAGA. [MEITO KOGYO CO., LTD.]. BLOOD-COAGULATION INHIBITORS. JAPAN 4896('60). MAY 9, 1960. (CHEM. ABSTR. 1961. 55:16920A.)

(651) ------, K. IWATA, AND M. SHAMOTO. [MEITO SANGYO K.K.]. ENTERIC-COATED TABLETS OF DEXTRAN SULFATE ESTER AND METHOD OF PREPARATION THEREOF. U.S. 3,126,320. MARCH 24, 1964.

(652) ------, K. IWATA, AND H. KOKKOKU. [MEITO SANGYO K.K.]. SODIUM AND POTASSIUM SALTS OF THE DEXTRAN SULPHURIC ACID ESTER HAVING SUBSTANTIALLY NO ANTICOAGULANT ACTIVITY BUT HAVING LIPOLYTIC ACTIVITY AND THE METHOD OF PREPARATION THEREOF. U.S. 3,141,014. JULY 14, 1964.

(653) ------, T. NUMASAWA, K. IWATA, AND OTHERS. [MEITO SANGYO CO., LTD.]. COMPLEX OF DEXTRAN SULFATE WITH ALUMINUM EFFECTIVE AGAINST DIGESTIVE ULCER. JAPAN 71 25,020. JULY 19, 1971. (CHEM. ABSTR. 1971. 75:121411S.)

(654) NAGASAWA, K. PROCESS OF MANUFACTURING DEXTRAN SULFATE. U.S. 3,498,972. MARCH 30, 1970.

(655) ------ AND H. YOSHIDOME. [SEIKAGAKU KOGYO CO., LTD.]. SULFURIC ACID ESTERS. JAPAN (KOKAI) 75 24,222. MARCH 15, 1975. (CHEM. ABSTR. 1975. 83:131478Y.)

(656) NATIONAL RESEARCH DEVELOPMENT CORP. SULPHURIC ESTERS OF POLYSACCHARIDES. AUSTRALIA 159,886. AUG. 25, 1952.*

(657) ------. PROCESS FOR FRACTIONATING DEXTRAN SULFATE. DENMARK (APPLN.) 2695/52. AUG. 6, 1956.*

(658) ------. PROCESS OF PREPARING DEXTRAN SULPHATE FOR THERAPEUTICAL USE. NETHERLANDS (APPLN.) 172,049. MAY 16, 1958.*

(659) NITTA, Y., Y. NAWATA, AND M. NAMEKATA. [CHUGAI SEIYAKU K.K.]. SULFATES OF LOW POLYMERIZED POLYSACCHARIDES. CANADA 703,978. FEB. 16, 1965.

(660) NIITANI, H., K. SUEMASU, AND T. MIWA. [KOWA CO., LTD.]. ANTITUMOROUS COMPOSITIONS CONTAINING DEXTRAN SULFATE. GERMANY (OFFEN.) 1,951,822. APRIL 22, 1971. (CHEM. ABSTR. 1971. 75:40,413S.)

(661) OKUYAMA, T., K. SAKURAI, AND T. TAKEI. [SEIKAGAKU KOGYO CO., LTD.]. POLYSACCHARIDE SULFATES. JAPAN (KOKAI) 72 20,117. SEPT. 27, 1972. (CHEM. ABSTR. 1973. 78:4485V.)

(662) ------, K. SAKURAI, AND Y. TANAKA. [SEIKAGAKU KOGYO CO., LTD.]. THERAPEUTIC AGENT FOR PEPTIC ULCER. JAPAN (KOKAI) 75 40,713. APRIL 14, 1975. (CHEM. ABSTR. 1975. 83:33073T.)

(663) RICARD, R., AND M. MARGARIT TAYA. [ROCADOR SOCIEDAD ÁNON.]. ANTILIPEMIC SULFATED POLYSACCHARIDES FOR ORAL USE. SPAIN 343,957. OCT. 1, 1968. (CHEM. ABSTR. 1969. 70:88202W.)

(664) RICKETTS, C. R. [NATIONAL RESEARCH DEVELOPMENT CORP.]. ANTICOAGULANT FROM DEXTRAN SULPHATE. NEW ZEALAND (APPLN.) 108,022. SEPT. 22, 1952.*

(665) ------. [NATIONAL RESEARCH DEVELOPMENT CORP.]. IMPROVEMENTS IN ANTICOAGULANTS. BRITAIN 695,787. AUG. 19, 1953.

(666) ------ AND K. W. W. H. WALTON. [NATIONAL RESEARCH DEVELOPMENT CORP.]. DEXTRAN SULFATE AS ANTICOAGULANT, PROCESS OF PREPARING SAME, AND STERILE SOLUTION THEREOF. U.S. 2,715,091. AUG. 9, 1955.

(667) ------ AND K. W. W. H. WALTON. [NATIONAL RESEARCH DEVELOPMENT CORP.]. PROCESS FOR PRODUCING ANTICOAGULANTS. GERMANY 954,592. DEC. 20, 1956.

(668) ------ AND K. W. W. H. WALTON. [NATIONAL RESEARCH DEVELOPMENT CORP.]. ANTICOAGULANTS CONSISTING OF SULFONATED DEXTRANS. CANADA 567,761. DEC. 23, 1958.

(669) SCHWENKE, K. D., B. SIMON, S. AUGUSTAT, AND OTHERS. OBTAINING PROTEINS FROM PLANT SEEDS. EAST GERMANY 103,144. JAN. 12, 1974. (CHEM. ABSTR. 1974. 81:76698B.)

OTHER PATENTS: 620 THROUGH 622 707 717 719 721

G. Dextran and Dextran Derivatives in Medicinal and Pharmaceutical Compositions

(670) CENTRAL PHARMACAL CO. PHARMACEUTICAL CONTAINING A CARBOXYALKYL DEXTRAN. BELGIUM 594,311. FEB. 22, 1961.*

(671) ------. PHARMACEUTICAL DRUG COMPOSITIONS AND METHODS OF MAKING SUCH COMPOSITIONS. BRITAIN 904,874. SEPT. 5, 1962.

(672) DE BELDER, A. N., AND B. J. LINDBERG. [AKTIEBOLAGET PHARMACIA]. DEXTRAN DERIVATIVES. GERMANY (OFFEN.) 1,916,943. NOV. 6, 1969. (CHEM. ABSTR. 1970. 72:79419M.)

(673) ------. [AKTIEBOLAGET PHARMACIA]. DEXTRAN ETHERS. SWEDEN 332,068. JAN. 25, 1971. (CHEM. ABSTR. 1973. 78:16451U.)

(674) ------ AND B. J. LINDBERG. [AKTIEBOLAGET PHARMACIA]. DEXTRAN DERIVATIVE. SWEDEN 364,288. FEB. 18, 1974. (CHEM. ABSTR. 1975. 82:171455Z.)

(675) ELLIS, G. P., AND T. B. LEE. [BENGER LABORATORIES LTD.]. CHLORAL-DEXTRAN COMPLEX. BRITAIN 66:5757S.) 1,046,612. OCT. 26, 1966. (CHEM. ABSTR. 1967.

(676) "FO-WE" FORSCHUNGS-UND VERWERTUNGS-ANSTALT IN VADUZ. METHOD FOR THE PRODUCTION OF A THERAPEUTICALLY EFFECTIVE PRODUCT. AUSTRIA 222,807. AUG. 10, 1962. (CHEM. ABSTR. 1962. 57:11323F.)

(677) FOWLER, F. [BENGER LABORATORIES LTD.]. INHALANT COMPOSITION AND METHOD OF MAKING SAME. U.S. 3,155,573. NOV. 3, 1964.

(678) FUJIMOTO, M. [FUJIMOTO PHARMACEUTICAL CO., LTD.]. SALICYLATE ESTERS OF DEXTRAN. JAPAN (KOKAI) 73 17,582. MARCH 6, 1973. (CHEM. ABSTR. 1973. 78:164099A.)

(679) GRANATEK, E. S., AND A. P. GRANATEK. [BRISTOL-MYERS CO.]. SALT OF A DIETHYLAMINOETHYL CROSS-LINKED DEXTRAN ANION EXCHANGER. U.S. 3,425,962. FEB. 4, 1969.

(680) ------ AND A. P. GRANATEK. [BRISTOL-MYERS CO.]. COMPOSITIONS FOR TREATING GASTROINTESTINAL DISORDERS. U.S. 3,624,209. NOV. 30, 1971.

(681) HALPERN, A. [SCHIEFFELIN & CO.]. OPHTHALMIC PREPARATIONS. CANADA 604,255. AUG. 30, 1960.

(682) HECKEL, H. C. N., AND R. T. JEFFERSON. [CENTRAL PHARMACAL CO.]. BENZYL DEXTRAN-AMPHETAMINE AND METHOD OF MAKING SAME. U.S. 3,063,906. NOV. 13, 1962.

(683) ------ AND R. T. JEFFERSON. [CENTRAL PHARMACAL CO.]. PREPARATION OF MEDICATED BENZYL DEXTRAN GRADUAL RELEASE THERAPEUTIC PRODUCTS CONTAINING UP TO 5 PERCENT BENZYL ALCOHOL. U.S. 3,130,125. APRIL 21, 1964.

(684) HOWARD, A. N. [AKTIEBOLAGET PHARMACIA]. TREATMENT OF HYPERCHOLESTEREMIA. U.S. 3,846,541. NOV. 5, 1974.

(685) KOLODKINA, I. I., E. I. PICHUZHKINA, E. A. IVANOVA, AND A. M. YURKEVICH. [ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF VITAMINS]. MODIFIED NATURAL POLYMERS. U.S.S.R. 406,841. NOV. 21, 1973. (CHEM. ABSTR. 1975. 83:98199H.)

(686) KOTERA, H., AND I. MATSUMOTO. [DAI-NIPPON DRUG MANUFACTURING CO.]. WATERPROOF COATING OF DRUGS. JAPAN 548('61). FEB. 4, 1961. (CHEM. ABSTR. 1961. 55:21493I.)

(687) KUZUYA, F. [MEITO SANGYO CO., LTD.]. DEXTRAN DERIVATIVES FOR THE REDUCTION OF BLOOD LIPIDS. U.S. 3,851,057. NOV. 26, 1974.

(688) LACKO, L., AND J. MALEK. CHEMOTHERAPEUTICS WITH PROLONGED EFFECT. CZECHOSLOVAKIA 90,794. JUNE 15, 1959. (CHEM. ABSTR. 1960. 54:7987F.)

(689) MIODUSZEWSKI, J. Z., M. LUKASZEWSKI, AND P. NANTKA-NAMIRSKI. [KUTNOWSKIE ZAKLADY FARMACEUTYCZNE "POLFA"]. NICOTINIC ESTERS OF DEXTRAN AND CARBOXYMETHYL DEXTRAN. POLAND 53,872. SEPT. 15, 1967. (CHEM. ABSTR. 1968. 69:27736F.)

(690) ------. [INSTYTUT FARMACEUTYCZNY]. PURE CARBOXYMETHYL DEXTRAN SOLUBLE IN WATER. POLAND 53,884. SEPT. 15, 1967. (CHEM. ABSTR. 1968. 68:70387J.)

(691) MIYAJI, H. [MEITO SANGYO CO., LTD.]. HYDROXYALKYLDEXTRAN DERIVATIVES. JAPAN (KOKAI) 75 53,486. MAY 12, 1975. (CHEM. ABSTR. 1975. 83:164512H.)

(692) MORII, E., S. TOMIZAWA, S. KATOH, AND OTHERS. [MEITO SANGYO K.K.]. CARBOXYMETHYLATED DEXTRAN FOR PEPTIC ULCERS. U.S 3,364,111. JAN. 16, 1968.

(693) ------, K. IWATA, AND H. HANAI. [MEITO SANGYO CO., LTD.]. DEXTRAN NICOTINATE. JAPAN 69 28,707. NOV. 25, 1969. (CHEM. ABSTR. 1970. 72:68462U.)

(694) MULLER, F. [KNOLL AKT.-GES.-CHEMISCHE FABRIKEN]. PROCESS FOR THE PRODUCTION OF GASTROINTESTINALLY RESORBABLE PREPARATIONS OF MEDICAMENTS. GERMANY (DAS) 1,174,452. JULY 23, 1964.

(695) NEGREVERGNE, G. [PURDUE FREDERICK CO.]. PHENYLBUTAZONE DERIVATIVES. FRANCE M1624. JAN. 21, 1963. (CHEM. ABSTR. 1963. 59:1649C.)

(696) NOVAK, L. J. [CENTRAL PHARMACAL CO.]. PRODUCTS HAVING RETARDATION EFFECTS FOR PHARMACEUTICAL COMPOSITIONS. FRANCE M561. JULY 3, 1961.

(697) ------. [ASSIGNEE B]. METHOD OF MAKING A COMPOSITION OF CARBOXYMETHYL DEXTRAN AND AN ANTIBIOTIC. U.S. 2,997,423. AUG. 22, 1961.

(698) ------. [CENTRAL PHARMACAL CO.]. CARBOXYMETHYLBENZYL DEXTRAN DEXTRO-AMPHETAMINE. U.S. 3,063,905. NOV. 13, 1962.

(699) ------. [CENTRAL PHARMACAL CO.]. CARBOXYMETHYLBENZYL DEXTRAN DEXTRO-AMPHETAMINE. CANADA 673,532. NOV. 5, 1963.

(700) ------. [CENTRAL PHARMACAL CO.]. ORAL PHARMACEUTICAL PRODUCTS PREPARED WITH CARBOXYMETHYLBENZYL DEXTRAN HAVING A LOW CARBOXYMETHYL D.S. OF 0.15. U.S. 3,130,126. APRIL 21, 1964.

(701) ------. [CENTRAL PHARMACAL CO.]. BEARER SUBSTANCE FOR PHARMACEUTICAL PRODUCTS. GERMANY (DAS) 1,177,773. SEPT. 10, 1964.

(702) NUMAZAWA, T., H. MIYAJI, AND H. HIROMI. [MEITO SANGRAN CO., LTD.]. (DIETHYLAMINO)ETHYL DEXTRAN ETHER. JAPAN 73 17,749. MAY 31, 1973. (CHEM. ABSTR. 1975. 82:88017N.)

(703) ------, H. HANAI, AND T. KOMORI. [MEITO SANGYO CO., LTD.]. AMINODEXTRAN. JAPAN 73 17,750. MAY 31, 1973. (CHEM. ABSTR. 1974. 80:84962C.)

(704) ------, H. HANAI, AND T. AOYAMA. [MEITO SANGYO CO., LTD.]. AMINODEXTRAN. JAPAN 73 17,751. MAY 31, 1973. (CHEM. ABSTR. 1974. 80:72292W.)

(705) ------, H. HANAI, AND T. KOMORI. [MEITO SANGYO CO., LTD.]. DEXTRAN DERIVATIVE. JAPAN 73 17,752. MAY 31, 1973. (CHEM. ABSTR. 1974. 81:14947Y.)

(706) PLATOSHKIN, A. M. [CENTRAL INSTITUTE OF HEMATOLOGY AND BLOOD TRANSFUSION]. BETA-AMINOETHYLDEXTRAN. U.S.S.R. 437,774. JULY 30, 1974. (CHEM. ABSTR. 1975. 82:74774V.)

(707) SAKURAI, K. [SEIKAGAKU KOGYO CO., LTD.]. POLYSACCHARIDE NICOTINATES. JAPAN (KOKAI) 73 00,472. JAN. 6, 1973. (CHEM. ABSTR. 1973. 78: 97965Q.)

(708) TOSONI, A. L., AND D. A. J. IVES. [GOVERNORS OF THE UNIVERSITY OF TORONTO AND ASTRA PHARMACEUTICAL PRODUCTS INC.]. PRODUCTION OF HIGH-ACTIVITY FIBRINOLYTIC AGENTS. U.S. 3,140,984. JULY 14, 1964.

(709) UPJOHN CO. HYPOCHLESTEROLEMIC BASIC DEXTRAN ETHERS. BRITAIN 1,133,845. NOV. 20, 1968. (CHEM. ABSTR. 1969. 70:60810U.)

(710) WITT, E. E. [ASSIGNEE B]. PRODUCTION AND RECOVERY OF BENZYL DEXTRAN. U.S. 3,196,146. JULY 20, 1965.

OTHER PATENTS: 260 THROUGH 262 269 274
283 THROUGH 287 290

H. Dextran and Dextran Derivatives in Diagnostic and Analytical Procedures

(711) ADAMS, E. C., JR., AND N. R. NOVAK. [MILES LABORATORIES INC.]. STABILIZED OCCULT BLOOD DIAGNOSTIC. U.S. 3,252,762. MAY 24, 1966.

(712) ------ AND C. T. HAITSMA. [MILES LABORATORIES INC.]. OCCULT BLOOD DIAGNOSTIC COMPOSITION WITH COLOR ENHANCING AGENT. U.S. 3,290,117. DEC. 6, 1966.

(713) BACKMAN, S. V., P. G. EMBRING, AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. COMPOSITION FOR X-RAY DIAGNOSIS. SWEDEN (APPLN.) 174,789. DEC. 12, 1952. (CHEM. ABSTR. 1962. 56:4879D.)

(714) ERNST, B. FLUORESCENT DEXTRANS. EAST GERMANY 51,631. NOV. 5, 1966. (CHEM. ABSTR. 1967. 66:98494Z.)

(715) ELDON, K. E. H. [NORDISK INSULIN-LABORATORIUM]. BLOOD GROUPING CARD. U.S. 2,770,572. NOV. 13, 1956.

(716) FUJII, S. [DAIICHI, SEIYAKU CO., LTD.]. FIBRIN-GEL PREPARATION FOR PLASMIN DETERMINATION. JAPAN (KOKAI) 74 29,697. MARCH 16, 1974. (CHEM. ABSTR. 1974. 81:60502X.)

(717) NAGAI, H., AND K. MAEDA. [KOWA CO., LTD.]. REAGENTS FOR THE DETERMINATION OF PLASMA FIBRINOGEN. JAPAN (KOKAI) 73 93,386. DEC. 3, 1973. (CHEM. ABSTR. 1974. 80:92932H.)

(718) NOVAK, L. J., AND W. S. HOGUE. [MIDLAND CHEMICAL CORP.]. CONTRAST COMPOSITIONS STABILIZED WITH CARBOXYMETHYL DEXTRAN ETHER. U.S. 2,746,906. MAY 22, 1956.

(719) SEIDEL, D., H. WIELAND, J. EIBL, AND OTHERS. [IMMUNO A.-G. FUER CHEMISCH-MEDIZINISCHE PRODUKTE]. DETERMINATION OF BLOOD LIPOPROTEINS. GERMANY (OFFEN.) 2,314,964. SEPT. 5, 1974. (CHEM. ABSTR. 1975. 82:1823A.)

(720) SPROSS, A. H. B. [AKTIEBOLAGET PHARMACIA]. DIAGNOSTIC AGENT FOR ENDOSCOPY OF BODY CAVITIES. GERMANY (OFFEN.) 2,336,546. JAN. 31, 1974. (CHEM. ABSTR. 1974. 80:100205R.)

(721) VOELKER, U. F. DETERMINATION OF BETA-LIPOPROTEINS IN BLOOD SERUM. GERMANY (OFFEN.) 2,013,644. OCT. 14, 1971. (CHEM. ABSTR. 1972. 76:11797K.)

I. Dextran and Dextran Derivatives in Cosmetics, Dentifrices, and Miscellaneous Medically Related Substances

(722) BEHRENS, U., K. DOERFEL, M. RINGPFEIL, AND OTHERS. PROCESS FOR THE PRODUCTION OF NOVEL, AUTOSTERILE PRODUCTS ON THE BASIS OF DEXTRAN FORMALDEHYDE. EAST GERMANY 28,595. MAY 25, 1964.

(723) ------, M. RINGPFEIL, A. GABERT, AND R. FREUDENBERG. PROCESS FOR THE PRODUCTION OF OINTMENT BASE FREE OF FAT. EAST GERMANY 31,760. OCT. 5, 1964.

(724) BISHOP, A. E. [ASSIGNEE B]. FIBERS AND FILAMENTS FROM DEXTRAN DERIVATIVES. BRITAIN 836,907. JUNE 9, 1960.

(725) COLGATE-PALMOLIVE CO. DENTIFRICE PREPARATIONS. BRITAIN 753,737. AUG. 1, 1956.

(726) COMMONWEALTH ENGINEERING CO. OF OHIO. FIBERS AND FILAMENTS PRODUCED IN PART FROM DEXTRAN DERIVATIVES. BELGIUM 556,873. AUG. 15, 1957.

(727) ------. NEW FLUFF POWDER BASE. BELGIUM 577,173. AUG. 16, 1959.*

(728) DOERFEL, K., A. GABERT, AND F. TURNHEIM. GELLED HAIR DYES. EAST GERMANY 44,479. JAN. 1, 1966. (CHEM. ABSTR. 1966. 64:15673A.)

(729) KLAUS, D., A. GABERT, AND F. TURNHEIM. SKIN-CARE AGENTS. EAST GERMANY 50,733. OCT. 5, 1966. (CHEM. ABSTR. 1967. 66:58810T.)

(730) FARRAR, G. E., JR., M. I. HERSH, AND J. O. BARNETT. [AMERICAN HOME PRODUCTS CORP.]. PROCESS FOR MAKING ANTIBIOTIC-ENZYME TOPICAL FILM-FORMING COMPOSITIONS. U.S. 2,973,300. FEB. 28, 1961.

(731) FEINSTONE, W. H., AND A. S. BLACK. [PLOUGH, INC.]. PROCEDURE TO SUPPRESS WRINKLES OF THE SKIN. FRANCE 1,440,233. MAY 27, 1966. (CHEM. ABSTR. 1967. 66:22132J.)

(732) ------ AND A. S. BLACK. [PLOUGH, INC.]. WRINKLE SMOOTHING OF HUMAN SKIN BY APPLICATION OF POLYMERIC COMPOSITIONS. U.S. 3,523,998. AUG. 11, 1970.

(733) FUJII, T., S. TOMIYAMA, AND M. IMORI. DETERGENT COMPOSITIONS. JAPAN 70 23,621. AUG. 7, 1970. (CHEM. ABSTR. 1971. 74:88964D.)

(734) HERB, J. R. [PHARMACHEM CORP.]. METHOD OF SHAVING EMPLOYING AN AQUEOUS SOLUTION OF DEXTRAN. U.S. 3,777,597. DEC. 11, 1973.

(735) MORII, E. [MEITO SANGYO K.K.]. SKIN COMESTIC. JAPAN 2,647('64). MARCH 13, 1964.*

(736) MORISHITA, M., M. FUKUSHIMA, AND Y. INABA. [TOYO JOZO CO., LTD.]. SPECIFIC ADSORBENT. JAPAN (KOKAI) 75 10,292. FEB. 1, 1975. (CHEM. ABSTR. 1975. 82:160,259N.)

(737) NOVAK, L. J. [ASSIGNEE B]. COLLAGEN STRANDS AND METHOD OF TREATING. U.S. 2,748,774. JUNE 5, 1956.

(738) ------. [ASSIGNEE B]. DEXTRAN COMPOUND FATTY ACID ESTER LIPSTICK. U.S. 2,749,276. JUNE 5, 1956.

(739) ------. [ASSIGNEE B]. IODO-CARBOXYMETHYL DEXTRAN AND METHODS OF MAKING IT. U.S. 2,811,516. OCT. 29, 1957.

(740) ------. [ASSIGNEE B]. IODO-DEXTRAN AND METHODS FOR PRODUCING THE SAME. U.S. 2,811,517. OCT. 29, 1957.

(741) ------. [ASSIGNEE B]. IODO-DEXTRAN AND METHODS FOR PRODUCING THE SAME. BRITAIN 815,421. JUNE 24, 1959.*

(742) ------. [ASSIGNEE B]. IODO-CARBOXYMETHYL DEXTRAN AND METHODS OF MAKING IT. BRITAIN 823,360. NOV. 11, 1959.

(743) ------. [ASSIGNEE B]. IODO-CARBOXYMETHYL DEXTRAN AND METHODS OF MAKING IT. CANADA 617,654. APRIL 4, 1961.

(744) ------. [ASSIGNEE B]. IODO-DEXTRAN AND METHOD FOR PRODUCING THE SAME. CANADA 617,655. APRIL 4, 1961.

(745) ------. [ASSIGNEE B]. DUSTING POWDER INCLUDING SALTS OF CARBOXYMETHYL DEXTRAN. U.S. 2,876,165. MARCH 3, 1959.

(746) ------. [ASSIGNEE B]. A DUSTING POWDER INCLUDING CARBOXYMETHYL DEXTRAN SALTS. BRITAIN 909,703. OCT. 31, 1962.*

(747) ------ AND J. T. TYREE. [ASSIGNEE B]. HIGHER FATTY ACID ESTERS OF DEXTRAN. CANADA 612,791. JAN. 17, 1961.

(748) OKUYAMA, T., AND K. SAKURAI. [SEIKAGAKU KOGYO CO., LTD.]. COSMETICS BASED ON GLYCOL-MODIFIED POLYSACCHARIDES OR THEIR SALTS. JAPAN (KOKAI) 74 19,037. FEB. 20, 1974. (CHEM. ABSTR. 1974. 81:16664C.)

(749) RUSSELL, K. L., AND M. F. NELSON, JR. [COLGATE-PALMOLIVE CO.]. DENTIFRICE CONTAINING DEXTRAN. NEW ZEALAND (APPLN.) 111,163. FEB. 17, 1954.

(750) ------ AND M. F. NELSON, JR. [COLGATE-PALMOLIVE CO.]. DEXTRAN DENTIFRICES. GERMANY 952,210. NOV. 15, 1956.

(751) ------ AND M. F. NELSON, JR. [COLGATE-PALMOLIVE CO.]. DEXTRAN DENTIFRICES. U.S. 2,779,708. JAN. 29, 1957.

(752) SAKURAI, K., AND Y. FUJITA. [SEIKAGAKU KOGYO CO., LTD.]. MANUFACTURE OF FATTY ACID ESTERS. JAPAN (KOKAI) 73 00,973. JAN. 9, 1973.

(753) SMITH, D. F. DEXTRAN AS BONDING AGENT FOR PLASTER OF PARIS BANDAGES. U.S. 3,791,837. FEB. 12, 1974.

(754) TOULMIN, H. A., JR. [ASSIGNEE B]. ARTIFICIAL SPONGE AND METHOD OF MAKING IT. U.S. 2,731,015. JAN. 17, 1956.

(755) ------. [ASSIGNEE B]. DEXTRAN COMPOUND COATED BODY POWDER. U.S. 2,749,277. JUNE 5, 1956.

(756) VEB SERUM-WERK BERNBURG. METHOD FOR THE PRODUCTION OF FAT-FREE OINTMENT BASES. AUSTRIA A8814/61. PUBLISHED DEC. 15, 1962.*

OTHER PATENTS: 84

XXXV. Production and industrial uses of dextran derivatives

A. Copolymers, Graft

(757) GARNETT, J. L., J. D. ROCK, AND T. Y. NGUYEN. [UNISEARCH LTD.]. POLYSACCHARIDE GRAFT POLYMERS. GERMANY (OFFEN.) 2,363,325. JUNE 27, 1974. (CHEM. ABSTR. 1975. 82:32745F.)

(758) HOOVER, M. F., AND G. D. SINKOVITZ. [CALGON CORP.]. CATIONIC DEXTRAN GRAFT COPOLYMERS AS DRY STRENGTH ADDITIVES FOR PAPER. U.S. 3,734,820. MAY 22, 1973.

(759) ------, G. D. SINKOVITZ, AND R. J. SCHAPER. [CALGON CORP.]. ANIONIC DEXTRAN GRAFT COPOLYMERS. U.S. 3,826,767. JULY 30, 1974.

(760) ------, G. DIMARCO, AND R. J. SCHAPER. [CALGON CORP.]. ANIONIC DEXTRAN GRAFT POLYMERS. GERMANY (OFFEN.) 2,316,412. OCT. 10, 1974. (CHEM. ABSTR. 1975. 82:73849M.)

(761) KAMIYA, S., T. YAMAMOTO, Y. ONISHI, AND S. HOKKOKU. [KARME FINE CHEMICAL CO., LTD.]. DEXTRAN-METHYL METHACRYLATE GRAFT COPOLYMERS. GERMANY (OFFEN.) 2,334,530. JAN. 24, 1974. (CHEM. ABSTR. 1974. 80:146607B.)

(762) NEELY, W. B. [DOW CHEMICAL CO.]. PROCESS FOR MODIFYING POLYSACCHARIDES AND PRODUCTS THEREOF. (GRAFTING BY ENZYMIC SYNTHESIS.) U.S. 3,133,856. MAY 19, 1964.

B. Cross-linked Gels and Water-Soluble, High-Viscosity Thickeners

(763) AKTIEBOLAGET PHARMACIA. PROCESS FOR MANUFACTURING GEL PRODUCTS FROM MATERIALS COMPRISING DEXTRAN. ITALY 605,659. JUNE 10, 1960.

(764) ------. PROCESS FOR THE PRODUCTION OF HYDROPHILIC PRODUCTS OF HIGH MOLECULAR WEIGHT FROM DEXTRAN. GERMANY (APPLN.) 1922/59. JULY 15, 1960.*

(765) ------. PROCESS FOR THE MANUFACTURE OF HYDROPHILIC HIGH MOLECULAR WEIGHT SUBSTANCES FROM DEXTRAN SUBSTANCES. BRITAIN 854,715. NOV. 23, 1960.

(766) ------. PREPARATION OF SUBSTITUTED HIGH MOLECULAR WEIGHT PRODUCTS. BRITAIN 936,039. SEPT. 4, 1963.*

(767) ------. METHOD FOR THE MANUFACTURE OF HIGH MOLECULAR WEIGHT HYDROPHILIC COPOLYMERS OF HYDROXYL GROUP CONTAINING UNCHARGED POLYMER SUBSTANCES IN GEL GRAIN FORM. BRITAIN 974,054. NOV. 4, 1964.

(768) ------. IMPROVEMENTS IN OR RELATING TO ION-EXCHANGE MATERIALS. BRITAIN 1,013,585. DEC. 15, 1965.

(769) BEHRENS, U., M. RINGPFEIL, AND A. GABERT. DEXTRAN DERIVATIVES. U.S.S.R. 154,215. JULY 24, 1963. (CHEM. ABSTR. 1964. 60:4242C.)

(770) ------, M. RINGPFEIL, AND A. GABERT. ORGANOGELS FROM DEXTRAN DERIVATIVES. U.S.S.R. 154,369. JULY 24, 1963. (CHEM. ABSTR. 1964. 60:1546H.)

(771) ------, M. RINGPFEIL, A. GABERT. [VEB SERUM-WERK BERNBURG]. PROCESS FOR PRODUCTION OF A HIGHLY SWELLABLE DEXTRAN DERIVATIVE. EAST GERMANY 27,389. FEB. 25, 1964.

(772) FLODIN, P. G. M., AND J. O. PORATH. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR SEPARATING MATERIALS HAVING DIFFERENT MOLECULAR WEIGHTS AND DIMENSIONS. U.S. 3,002,823. OCT. 3, 1961.

(773) ------ AND B. G. A. INGELMAN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR PRODUCING DEXTRAN DERIVATIVES AND PRODUCTS RESULTING THEREFROM. U.S. 3,042,667. JULY 3, 1962.

(774) ------. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR PREPARING HYDROPHILIC COPOLYMERIZATION AND PRODUCT OBTAINED THEREBY. U.S. 3,208,994. SEPT. 28, 1965.

(775) ------, J. A. O. JOHANSSON, AND S. A. I. CARLSSON. [AKTIEBOLAGET PHARMACIA]. CATION-EXCHANGERS FROM CROSSLINKED POLYHYDROXY MATERIALS. U.S. 3,275,576. SEPT. 27, 1966.

(776) ------, J. A. O. JOHANSSON, AND S. A. I. CARLSSON. [AKTIEBOLAGET PHARMACIA]. ANION-EXCHANGER FROM CROSSLINKED POLYHYDROXY MATERIALS. U.S. 3,277,025. OCT. 4, 1966.

(777) ------ AND J. O. PORATH. [AKTIEBOLAGET PHARMACIA]. POLYMER SEPARATION MEDIUM IN THE FORM OF SOLVENT-SWOLLEN GEL PARTICLES. GERMANY 1,292,883. APRIL 17, 1969. (CHEM. ABSTR. 1969. 71:14396M.)

(778) ------. [AKTIEBOLAGET PHARMACIA]. FRACTIONATING DIFFERENT MOLECULAR WEIGHT SUBSTANCES FROM SOLUTIONS CONTAINING GEL GRANULES. SWEDEN 358,894. AUG. 13, 1973. (CHEM. ABSTR. 1974. 81:4467C.)

(779) GABERT, A., AND H. SEIDE. [VEB SERUM-WERK BERNBURG]. DEXTRAN BEADS. FRANCE 1,480,801. MAY 12, 1967. (CHEM. ABSTR. 1968. 68:4193S.)

(780) GELOTTE, E. B., AND B. G. F. SODERQVIST. [AKTIEBOLAGET PHARMACIA]. SUBSTITUTION PRODUCTS WITH GOOD SWELLABILITY IN THE TYPICAL SOLVENT CHLOROFORM, FOR USE AS SEPARATION MEDIA IN GEL FILTRATION. SWEDEN 319,903. JAN. 26, 1970. (CHEM. ABSTR. 1972. 77:77021E.)

(781) INGELMAN, B. G. A., AND P. G. M. FLODIN. [AKTIEBOLAGET PHARMACIA]. PROCESS FOR THE MANUFACTURE OF HYDROPHILIC HIGH MOLECULAR WEIGHT SUBSTANCES FROM DEXTRAN SUBSTANCES. SWEDEN 169,293. NOV. 10, 1958.

(782) MCNEELEY, W. H., AND O. G. LOWE. [KELCO CO.]. METHOD OF PRODUCING A HIGH VISCOSITY WATER-SOLUBLE GUM PRODUCT. U.S. 2,976,274. MARCH 21, 1961.

(783) OWEN, W. L. ALDEHYDE REACTION PRODUCTS. U.S. 2,602,082. JULY 1, 1952.

(784) REGNIER, F. E. BONDED CARBOHYDRATE STATIONARY PHASES FOR CHROMATOGRAPHY. U.S. PAT. APPL. SERIAL NO. 537,197. DEC. 30, 1974.

(785) SHIMIZU, H., AND H. OZAWA. [TORAY INDUSTRIES, INC.]. STABLE HYDROGELS. JAPAN (KOKAI) 73 80,640. OCT. 29, 1973. (CHEM. ABSTR. 1974. 80:146654Q.)

(786) SJOVALL, J. B., E. H. NYSTROM, AND J. ELLINGBOE. LIPOPHILIC-HYDROPHOBIC POLYSACCHARIDE DERIVATIVES. BRITAIN 1,242,735. AUG. 11, 1971. (CHEM. ABSTR. 1972. 76:35431N.)

(787) ------, E. H. NYSTROM, AND J. ELLINGBOE. POLYSACCHARIDES. GERMANY (OFFEN.) 2,041,636. FEB. 24, 1972. (CHEM. ABSTR. 1972. 77:7633G.)

(788) ------, E. H. NYSTROM, J. ELLINGBOE. HALO HYDROXY ALKOXY ALKYL DERIVATIVES OF POLYSACCHARIDES. SWEDEN 348,205. AUG. 28, 1972. (CHEM. ABSTR. 1973. 78:113036V.)

C. Dialdehyde (Periodate-Oxidized) Dextrans

(789) BORCHERT, P. J. [MILES LABORATORIES INC.]. DIALDEHYDE POLYSACCHARIDE-PHENOL DERIVATIVES. U.S. 3,117,105. JAN. 7, 1964.

(790) ------. [MILES LABORATORIES INC.]. ACETALS OF DIALDEHYDE POLYSACCHARIDES. U.S. 3,242,161. MARCH 22, 1966.

(791) ------, W. L. KASER, AND J. MIRZA. [MILES LABORATORIES INC.]. CELLULOSIC PRODUCT OF IMPROVED STRENGTH AND PROCESS THEREFOR. U.S. 3,269,852. AUG. 30, 1966.

(792) CURTIS, J. H. [MILES LABORATORIES INC.]. REACTION PRODUCT OF A DIALDEHYDE POLYSACCHARIDE WITH A METAL SALT AND PREPARING PAPER CONTAINING SAME. U.S. 3,236,721. FEB. 22, 1966.

(793) ------. [MILES LABORATORIES INC.]. WATER-DISPERSIBLE FORM OF DIALDEHYDE POLYSACCHARIDES AND PROCESS THEREFOR. U.S. 3,236,792. FEB. 22, 1966.

(794) ------. [MILES LABORATORIES INC.]. WATER DISPERSIBLE FORM OF DIALDEHYDE POLYSACCHARIDES AND PROCESS THEREFOR. U.S. 3,269,964. AUG. 30, 1966.

(795) KEEN, J. L., W. J. WARD, R. R. SWANSON, AND H. N. DUNNING. [GENERAL MILLS INC.]. PREPARATION OF MODIFIED POLYSACCHARIDES. U.S. 3,239,500. MARCH 8, 1966.

(796) LANGHAMMER, G., A. GABERT, G. LUDWIG, AND H. WAND. WATER-SOLUBLE DIALDEHYDE POLYSACCHARIDES. EAST GERMANY 87,778. FEB. 12, 1972. (CHEM. ABSTR. 1972. 77:116340C.)

(797) MILES LABORATORIES INC. DIALDEHYDE POLYSACCHARIDE-PHENOL DERIVATIVES. BRITAIN 932,657. JULY 31, 1963.

(798) ------. COATING COMPOSITION AND PROCESS. BRITAIN 1,000,888. AUG. 11, 1965.

(799) MORII, E., K. IWATA, AND H. HANAI. [MEITO SANGYO K.K.]. DEXTRAN DERIVATIVES. JAPAN 16,676/65. JULY 30, 1965. (CHEM. ABSTR. 1966. 65:5644B.)

(800) ROSENBERG, S., AND D. BANDEL. [AMERICAN MACHINE & FOUNDRY CO.]. POLYSACCHARIDE COMPOSITION AND METHOD OF MANUFACTURE. U.S. 2,988,455. JUNE 13, 1961.

(801) ------ AND D. BANDEL. [AMERICAN MACHINE & FOUNDRY CO.]. POLYSACCHARIDE COMPOSITION AND METHOD OF MANUFACTURE. CANADA 674,904. NOV. 26, 1963.*

(802) SLAGER, J. E. [MILES LABORATORIES INC.]. PROCESS FOR PERIODATE OXIDATION OF POLYSACCHARIDES. U.S. 3,086,969. APRIL 23, 1963.

D. Esters of Organic and Inorganic Acids

(803) COLONIAL SUGAR REFINING CO., LTD. HIGH-VISCOSITY GUMS. BRITAIN 1,154,993. JUNE 11, 1969. (CHEM. ABSTR. 1969. 71:72201E.)

(804) BISHOP, A. E., AND L. J. NOVAK. [ASSIGNEE B]. PROCESS FOR PREPARING DEXTRAN PHOSPHATES. U.S. 2,970,141. JAN. 31, 1961.

(805) COMMONWEALTH ENGINEERING CO. OF OHIO. NITRATES OF DEXTRANIC ACID. BELGIUM 577,903. AUG. 16, 1959.*

(806) GAVER, K. M. [OHIO STATE UNIVERSITY RESEARCH FOUNDATION]. UNIFORMLY 2-SUBSTITUTED GLYCOPYRANOSE POLYMERS. U.S. 2,518,135. AUG. 8, 1950.

(807) ------, E. P. LASURE, AND L. M. THOMAS. [KEEVER STARCH CO.]. UNIFORMLY SUBSTITUTED ESTERS OF GLYCOPYRANOSE POLYMERS. U.S. 2,538,903. JAN. 23, 1951.

(808) ------, E. P. LASURE, AND L. M. THOMAS. [KEEVER STARCH CO.]. REACTIONS OF GLYCOPYRANOSE POLYMERS WITH SUBSTITUTED AMMONIUM HYDROXIDES. U.S. 2,563,526. AUG. 7, 1951.

(809) JEANES, A., AND C. A. WILHAM. [ASSIGNEE A]. ACYLATION OF DEXTRAN IN FORMAMIDE. U.S. 2,587,623. MARCH 4, 1952.

(810) NOVAK, L. J., AND A. E. BISHOP. [ASSIGNEE B]. ACYLATED AMINO ACID ESTERS OF DEXTRAN PRODUCTS AND METHOD OF MAKING SAME. U.S. 2,808,405. OCT. 1, 1957.

(811) ------ AND A. E. BISHOP. [ASSIGNEE B]. ACYLATED AMINO ACID ESTERS OF DEXTRAN PRODUCT AND METHODS OF MAKING. CANADA 573,778. APRIL 7, 1959.

(812) ------ AND J. J. BULLOFF. [ASSIGNEE B]. ARTIFICIAL TUBING. U.S. 2,817,592. DEC. 24, 1957.

(813) ------. [ASSIGNEE B]. NITRATES OF DEXTRANIC ACID AND PROCESS THEREFOR. U.S. 2,897,194. JULY 28, 1959.

(814) ------. [MIDLAND CHEMICAL CORP.]. THICKENED OR GELLED NORMALLY LIQUID NITROPARAFFIN PROPELLANTS. U.S. 2,921,846. JAN. 19, 1960.

(815) ------. [MIDLAND CHEMICAL CORP.]. THICKENED OR GELLED NORMALLY LIQUID NITRO-PARAFFINS. BRITAIN 859,272. JAN. 18, 1961.

(816) ------. [MIDLAND CHEMICAL CORP.]. PROCESS FOR MANUFACTURE OF EXPLOSIVES AND/OR PROPELLANTS FROM HOMOGENEOUS SEMISOLID OR SOLID NITROPARAFFINS. GERMANY 1,106,659. NOV. 30, 1961. (CHEM. ABSTR. 1962. 56:622I.)

(817) ------. [ASSIGNEE B]. SULFURIC ACID ESTERS OF DEXTRANIC ACID. U.S. 2,897,193. JULY 28, 1959.

(818) ------. [ASSIGNEE B]. SULFURIC ACID ESTERS OF DEXTRANIC ACID. BRITAIN 873,995. AUG. 2, 1961.*

(819) ------. [ASSIGNEE B]. NITRATES OF DEXTRANIC ACID. BRITAIN 910,922. NOV. 21, 1962.

(820) ------. [ASSIGNEE B]. METHOD FOR THE PRODUCTION OF NITRIC ACID ESTERS OF DEXTRAN ACIDS. GERMANY 1,139,109. MAY 16, 1963.

(821) ------. [ASSIGNEE B]. SULFURIC ACID ESTERS OF DEXTRAN ACID. CANADA 715,080. AUG. 3, 1965.*

(822) WALDIE, W. A., AND J. E. BERSUDER. [CHEMICAL DEVELOPMENTS CORP.]. PREPARATION OF DEXTRAN ACETATE. U.S. 2,344,190. MARCH 14, 1944.

(823) ------ AND J. E. BERSUDER. [CHEMICAL DEVELOPMENTS CORP.]. METHOD OF PRODUCING DEXTRAN ACETATE. U.S. 2,386,994. OCT. 16, 1945.

E. Ethers

Carboxymethyl, cyanoethyl, and others.

(824) BEHRENS, U., M. RINGPFEIL, A. GABERT, AND R. WEILAND. PROCESS FOR THE PRODUCTION OF CARBOXYMETHYL DEXTRAN OR ITS SALTS. EAST GERMANY 28,566. MAY 25, 1964.

(825) BERGER, C., AND L. J. NOVAK. [ASSIGNEE B]. FERROUS CARBOXYMETHYL DEXTRAN. U.S. 2,862,920. DEC. 2, 1958.

(826) ------ AND L. J. NOVAK. [ASSIGNEE B]. FERROUS CARBOXYMETHYL DEXTRAN. CANADA 623,709. JULY 11, 1961.

(827) ------ AND L. J. NOVAK. [ASSIGNEE B]. IRON CARBOXYMETHYL DEXTRAN. BRITAIN 891,770. MARCH 21, 1962.

(828) BIKALES, N. M. [AMERICAN CYANAMID CO.]. CYANOETHYLATED DEXTRAN. CANADA 672,893. OCT. 22, 1963.

(829) CLARKSON, A. H. [ASSIGNEE B]. A METHOD OF PREPARING A GEL USING A CARBOXYMETHYL DEXTRAN. BRITAIN 876,927. SEPT. 6, 1961.

(830) GAERTNER, V. R. [MONSANTO CHEMICAL CO.]. SUGAR ETHERS. U.S. 3,048,577. AUG. 7, 1962.

(831) HILER, M. J. [ASSIGNEE B]. DETERGENT-SOIL SUSPENDING COMPOSITION CONTAINING CARBOXYMETHYL DEXTRAN. U.S. 2,847,385. AUG. 12, 1958.

(832) ISBELL, H. S. [UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF COMMERCE]. APPARATUS FOR INTRODUCING ALKALI METAL INTO CLOSED SYSTEMS. U.S. 2,791,492. MAY 7, 1957.

(833) MARTIN, T. L. A PROCESS FOR THE PREPARATION OF COMPOUNDS OF POLYSACCHARIDES AND AMINO ALCOHOLS PRODUCED BY MEANS OF ETHER BONDS. DENMARK (APPLN.) 4187/55. MARCH 24, 1958.*

(834) NOVAK, L. J. [ASSIGNEE B]. TOBACCO PRODUCTS AND METHOD OF MAKING. U.S. 2,778,753. JAN. 22, 1957.

(835) ------. [ASSIGNEE B]. STABLE CONCENTRATED AQUEOUS DISPERSION OF PESTICIDES AND THE LIKE. U.S. 2,786,011. MARCH 19, 1957.

(836) ------. [MIDLAND CHEMICAL CORP.]. DEXTRAN ETHER FORMALDEHYDE REACTION PRODUCT. U.S. 2,961,439. NOV. 22, 1960.

(837) ------. [ASSIGNEE B]. WATER-SOLUBLE FILMS FOR PACKAGING PURPOSES. U.S. 2,982,394. MAY 2, 1961.

(838) ------. [ASSIGNEE B]. CARBOXYMETHYL BENZYL DEXTRAN. U.S. 2,989,518. JUNE 20, 1961.

(839) ------. [ASSIGNEE B]. CARBOXYMETHYL DEXTRAN IRON COMPLEXES. CANADA 623,706. JULY 11, 1961.

(840) ------ AND J. J. BULLOFF. [ASSIGNEE B]. STABLE ALKALINE METAL SOLUTIONS CONTAINING CARBOXYMETHYL DEXTRAN. U.S. 2,856,366. OCT. 14, 1958.

(841) ------ AND J. J. BULLOFF. [ASSIGNEE B]. STABLE ALKALI METAL SOLUTIONS CONTAINING CARBOXYMETHYL DEXTRAN. BRITAIN 856,292. DEC. 14, 1960.

(842) ------ AND J. J. BULLOFF. [ASSIGNEE B]. STABLE ALKALINE METAL SOLUTIONS CONTAINING CARBOXYMETHYL DEXTRAN. CANADA 614,638. FEB. 14, 1961.

(843) ------ AND J. T. TYREE. [ASSIGNEE B]. THICKENING AND GEL-FORMING AGENTS. GERMANY 1,105,392. NOV. 16, 1961.

(844) ------ AND E. E. WITT. [MIDLAND CHEMICAL CORP.]. TREATMENT OF SOIL WITH SOIL CONDITIONING AGENTS CONTAINING CARBOXYMETHYL DEXTRAN. U.S. 2,780,888. FEB. 12, 1957.

(845) ------ AND E. E. WITT. [MIDLAND CHEMICAL CORP.]. SOIL CONDITIONING AGENTS COMPRISING CARBOXYMETHYL DEXTRAN. CANADA 624,757. AUG. 1, 1961.

(846) POLUSHINA, T. V., V. A. ZHESTKOV, AND G. Y. ROZENBERG. [CENTRAL INSTITUTE OF HEMATOLOGY AND BLOOD TRANSFUSION]. CARBOXYMETHYL ETHER OF DEXTRAN. U.S.S.R. 371,250. FEB. 22, 1973. (CHEM. ABSTR. 1973. 79:32888T.)

(847) STAHLY, G. L., AND W. W. CARLSON. PRODUCTION OF DEXTRAN ETHERS. BRITAIN 517,397. JAN. 29, 1940.

(848) ------ AND W. W. CARLSON. PRODUCTION OF ETHER DERIVATIVES OF DEXTRAN. BRITAIN 517,398. JAN. 29, 1940.

(849) ------ AND W. W. CARLSON. A METHOD OF PRODUCING SOLUBLE BENZYL ETHER OF DEXTRAN. BRITAIN 517,820. FEB. 9, 1940.

(850) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. METHOD OF MAKING ETHER AND ESTER DERIVATIVES OF POLYSACCHARIDES SYNTHESIZED THROUGH BACTERIAL ACTION. U.S. 2,203,702. JUNE 11, 1940.

(851) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. ETHERS OF DEXTRAN. U.S. 2,203,703. JUNE 11, 1940.

(852) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. CHEMICAL METHOD OF ETHERIFYING DEXTRAN. U.S. 2,203,704. JUNE 11, 1940.

(853) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. SOLUBLE BENZYL ETHER OF DEXTRAN. U.S. 2,203,705. JUNE 11, 1940.

(854) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. ETHER OF POLYSACCHARIDE GUM. CANADA 391,240. SEPT. 10, 1940.

(855) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. DEXTRAN BENZYL PHTHALATE. U.S. 2,229,941. JAN. 28, 1941.

(856) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. SOLUBLE BENZYL ETHER OF DEXTRAN. CANADA 394,661. FEB. 18, 1941.

(857) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. SOLUBLE BENZYL ETHER OF DEXTRAN. CANADA 394,662. FEB. 18, 1941.

(858) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. ORGANIC SOLVENT SOLUBLE BENZYL ETHER OF DEXTRAN. U.S. 2,236,386. MARCH 25, 1941.

(859) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. DEXTRAN ETHER ESTER. U.S. 2,239,980. APRIL 29, 1941.

(860) ------ AND W. W. CARLSON. [COMMONWEALTH ENGINEERING CORP.]. DEXTRAN RESINOUS PRODUCT. U.S. 2,249,544. JULY 15, 1941.

(861) ------ AND W. W. CARLSON. [ASSIGNEE B]. PROCESS OF PRODUCING SOLUBLE BENZYL ETHERS OF DEXTRAN. U.S. 2,328,036. AUG. 31, 1943.

(862) ------ AND W. W. CARLSON. [CHEMICAL DEVELOPMENTS CORP.]. ETHYL ETHER OF DEXTRAN. U.S. 2,344,179. MARCH 14, 1944.

(863) ------ AND W. W. CARLSON. [CHEMICAL DEVELOPMENTS CORP.]. SOLUBLE BENZYL ETHER OF DEXTRAN. U.S. 2,344,180. MARCH 14, 1944.

(864) ------ AND W. W. CARLSON. [CHEMICAL DEVELOPMENTS CORP.]. SOLUBLE BENZYL ETHER OF DEXTRAN. U.S. 2,380,879. JULY 31, 1945.

(865) ------ AND W. W. CARLSON. [CHEMICAL DEVELOPMENTS CORP.]. SOLUBLE BENZYL ETHER OF DEXTRAN. U.S. 2,385,553. SEPT. 25, 1945.

(866) TOULMIN, H. A., JR. [ASSIGNEE B]. COMPOSITIONS COMPRISING NORMALLY WATER-INSOLUBLE DYESTUFFS AND DEXTRAN. CANADA 605,575. FEB. 3, 1958.

(867) ------. [ASSIGNEE B]. COMPOSITIONS COMPRISING NORMALLY WATER-INSOLUBLE DYESTUFFS AND DEXTRAN DERIVATIVES. BRITAIN 818,750. AUG. 19, 1959.

(868) ------. [ASSIGNEE B]. LOW WATER LOSS CEMENT SLURRIES COMPRISING CARBOXYMETHYL DEXTRAN AND SALTS THEREOF. U.S. 2,902,378. SEPT. 1, 1959.

(869) ------. [ASSIGNEE B]. CEMENT SUSPENSION CONTAINING DEXTRAN OF MOLECULAR WEIGHT GREATER THAN 5000 AND CEMENT POWDER MIXED WITH DEXTRAN FOR MAKING OF SOME SUSPENSION. SWEDEN 168,958. OCT. 13, 1959.

(870) ------. [ASSIGNEE B]. LOW WATER LOSS CEMENT SLURRIES COMPRISING CARBOXYMETHYL DEXTRAN AND SALTS THEREOF. CANADA 610,695. DEC. 13, 1960.

(871) VEB FOTOCHEMISCHE WERKE BERLIN. CARBOXYMETHYL AND/OR CARBOXYALKYL POLYSACCHARIDES. BELGIUM 647,047. OCT. 26, 1964.*

(872) WENZELBERGER, E. P. [MIDLAND CHEMICAL CORP.]. WATER EMULSION PAINT CONTAINING CARBOXYMETHYL DEXTRAN AS A THICKENER. U.S. 2,854,421. SEPT. 30, 1958.

F. Photographic Industry

(873) FOGG, D. B., AND A. C. SMITH, JR. [EASTMAN KODAK CO.]. PHOTOGRAPHIC MATERIAL FOR THE SILVER HALIDE COMPLEX TRANSFER PROCESS. U.S. 3,369,901. FEB. 20, 1968.

(874) GAVAERT PHOTO-PRODUCTEN N.V. PREPARATION OF ORGANIC ESTERS OF POLYSACCHARIDES. BRITAIN 1,025,152. APRIL 6, 1966.

(875) JUERGENS, M., H. WELZEL, AND G. HARTUNG. [VEB FOTOCHEMISCHE WERKE, BERLIN]. SULFOALKYLATED POLYSACCHARIDES FOR IMPROVING SILVER HALIDE PHOTOGRAPHIC EMULSIONS. BELGIUM 665,862. DEC. 24, 1965. (CHEM. ABSTR. 1968. 68:83109V.)

(876) ------, H. WELZEL, AND G. HARTUNG. SILVER HALIDE EMULSIONS. EAST GERMANY 49,157. JULY 20, 1966. (CHEM. ABSTR. 1967. 66:7112H.)

(877) ------, H. WELZEL, AND G. HARTUNG. [VEB FOTOCHEMISCHE WERKE, BERLIN]. GELATIN-SILVER HALIDE PHOTOGRAPHIC EMULSIONS POSSESSING INCREASED COVERING POWER. BRITAIN 1,064,215. APRIL 5, 1967. (CHEM. ABSTR. 1967. 67:7038K.)

(878) ------, H. WELZEL, AND G. HARTUNG. [VEB FOTOCHEMISCHE WERKE, BERLIN]. HIGHLY SENSITIVE GELATIN-SILVER IODOBROMIDE EMULSIONS. GERMANY 1,293,579. APRIL 24, 1969. (CHEM. ABSTR. 1969. 71:44438U.)

(879) LEBERZAMMER, E. [E.I. DU PONT DE NEMOURS & CO.]. LIGHT-SENSITIVE GELATIN SILVER HALIDE EMULSIONS. GERMANY (OFFEN.) 1,928,226. DEC. 18, 1969. (CHEM. ABSTR. 1970. 72:95315E.)

(880) LEE, E. W., AND N. E. GAMBLES. [ILFORD LTD.]. ANTISTATIC COATING FOR PHOTOGRAPHIC FILMS. GERMANY (OFFEN.) 2,116,037. OCT. 14, 1971. (CHEM. ABSTR. 1972. 76:8919W.)

(881) LEMMERLING, J. T. [GAVAERT PHOTO-PRODUCTEN N.V.]. PROCESS FOR THE PRODUCTION OF POLYSACCHARIDE CARBOXYLIC ACID ESTERS. GERMANY (DAS) 1,174,753. JULY 30, 1964.

(882) MEITO SANGYO CO., LTD., AND KONISHIROKU PHOTO INDUSTRY CO., LTD. MODIFIED PHOTOGRAPHIC GELATIN COATINGS. FRANCE 1,553,411. JAN. 10, 1969. (CHEM. ABSTR. 1970. 72:17269D.)

(883) SVIRIDOV, N. K., I. S. KAS'YANOV, L. S. ROZENSHTRAUKH, AND OTHERS. [MOSCOW SCIENTIFIC-RESEARCH ROENTGEN-RADIOLOGICAL INST.]. X-RAY CONTRAST SUBSTANCE. U.S.S.R. 299,226. MARCH 26, 1971. (CHEM. ABRSQ. 1971. 75:67490B.)

(884) WELZEL, H., M. JUERGENS, G. HARTUNG, AND H. WARNCKE. [JUERGENS, RALF AND JUERGENS, UWE]. PHOTOGRAPHIC SILVER HALIDE GELATIN EMULSIONS WITH NOVEL COAGULATING AGENTS. EAST GERMANY 62,514. JUNE 20, 1968. (CHEM. ABSTR. 1969. 70:92266N.)

G. Textiles, Filaments, Dyestuffs, Paints, and Paper

(885) BEHRENS, U., M. RINGPFEIL, A. GABERT, AND E. OTTE. PROCESS FOR THE SWELL PROOFING AND CREASE RESISTANT FINISH OF TEXTILES OF CELLULOSE FIBERS THROUGH FORMALIZATION. EAST GERMANY 31,814. OCT. 10, 1964.

(886) BISHOP, A. E. [ASSIGNEE B]. PLASTICIZED BENZYL DEXTRAN AND FILAMENT FORMED THEREFROM. U.S. 2,789,915. APRIL 23, 1957.

(887) ------. [ASSIGNEE B]. FIBERS AND FILAMENTS FROM DEXTRAN DERIVATIVES. U.S. 2,914,415. NOV. 24, 1959.

(888) BRIDGEFORD, D. J. [TEE-PAK INC.]. DECAUSTICIZATION OF POLYSACCHARIDE XANTHATES. U.S. 3,291,789. DEC. 13, 1966.

(889) COMMONWEALTH ENGINEERING CO. OF OHIO. DEXTRAN FILAMENT MANUFACTURE. SOUTH AFRICA 21,831. MARCH 21, 1955.

(890) DENISTON, G. L. [ASSIGNEE B]. DEXTRAN FILAMENT MANUFACTURE. U.S. 2,674,517. APRIL 6, 1954.

(891) ------. [ASSIGNEE B]. DEXTRAN FILAMENT MANUFACTURE. U.S. 2,702,231. FEB. 15, 1955.

(892) ------. [ASSIGNEE B]. CHEMICALLY RESISTANT COTTON MATERIALS. U.S. 2,731,369. JAN. 17, 1956.

(893) ------. [ASSIGNEE B]. ADHESIVE COTTON ARTICLE AND METHOD OF MAKING SAME. U.S. 2,746,880. MAY 22, 1956.

(894) ------. [ASSIGNEE B]. DEXTRAN FILAMENT MANUFACTURE. CANADA 536,397. JAN. 29, 1957.

(895) ------. [ASSIGNEE B]. PROCESS FOR FINISHING COTTON FIBERS, YARN AND MATERIALS WITH DEXTRAN DERIVATIVES. GERMANY 1,051,238. AUG. 13, 1959.

(896) ------. [ASSIGNEE B]. MANUFACTURE OF A STABLE FIBER CONTAINING A DEXTRAN ETHER AS A BASIC COMPONENT. MEXICO 60,766. AUG. 28, 1959.

(897) FOOTE, E. H., JR. [ASSIGNEE B]. DEXTRAN FORMALS. U.S. 2,893,987. JULY 7, 1959.

(898) FRANKS, N. E. [PROCTER AND GAMBLE CO.]. WATER-INSOLUBLE PROTEASE-DIAZOTIZED DEXTRAN ANTHRANILATE ADDUCTS FOR DETERGENTS. GERMANY (OFFEN.) 2,047,496. APRIL 8, 1971. (CHEM. ABSTR. 1971. 75:22975X.)

(899) LUACES, E. L. [NEW WRINKLE INC.]. WRINKLE DRYING COMPOSITION CONTAINING DEXTRAN BENZYL ETHER. U.S. 2,490,070. DEC. 6, 1949.

(900) ------. [NEW WRINKLE INC.]. DEXTRAN BASE WRINKLE DRYING COMPOSITIONS. U.S. 2,503,622. APRIL 11, 1950.

(901) ------. [NEW WRINKLE INC.]. DEXTRAN BASE WRINKLE DRYING COMPOSITIONS. U.S. 2,503,623. APRIL 11, 1950.

(902) ------. [NEW WRINKLE INC.]. DEXTRAN BASE WRINKLE DRYING COMPOSITIONS. U.S. 2,503,624. APRIL 11, 1950.

(903) NOVAK, L. J. [ASSIGNEE B]. METHOD OF SETTING THE TWIST IN TWISTED YARNS. U.S. 2,734,006. FEB. 7, 1956.

(904) ------. [ASSIGNEE B]. FIBROUS PRODUCTS COMPRISING FIBERS BONDED WITH DEXTRAN XANTHATE. U.S. 2,736,652. FEB. 28, 1956.

(905) ------. [ASSIGNEE B]. TWIST-SET YARNS AND METHOD OF PREPARING. BRITAIN 802,332. OCT. 1, 1958.

(906) ------. [ASSIGNEE B]. FIBROUS PRODUCTS COMPRISING FIBERS BONDED WITH DEXTRAN XANTHATE. CANADA 582,032. AUG. 25, 1959.

(907) ------. [ASSIGNEE B]. METHOD OF DRY CLEANING AND RENDERING FABRICS WATER REPELLENT. U.S. 2,933,411. APRIL 19, 1960.

(908) ------. [ASSIGNEE B]. ANTISTATIC MATERIAL AND METHOD OF APPLICATION. U.S. 2,990,299. JUNE 27, 1961.

(909) ------ AND J. T. TYREE. [ASSIGNEE B]. MOISTUREPROOF PELLICLES AND METHOD OF MAKING THEM. U.S. 2,766,143. OCT. 9, 1956.

(910) ------ AND J. T. TYREE. [ASSIGNEE B]. MOISTURE PROOF PELLICLES AND METHOD OF MAKING. CANADA 590,338. JAN. 5, 1960.

(911) ------ AND J. T. TYREE. [ASSIGNEE B]. WATER RESISTANT TEXTILES AND METHOD OF PREPARING. BRITAIN 810,565. MARCH 18, 1959.*

(912) RUSSELL, C. R., R. A. BUCHANAN, AND C. E. RIST. [ASSIGNEE A]. CELLULOSIC PULPS COMPRISING CROSSLINKED XANTHATE CEREAL PULPS AND PRODUCTS MADE THEREWITH. U.S. 3,160,552. DEC. 8, 1964.

(913) TOULMIN, H. A., JR. [ASSIGNEE B]. AZO DYESTUFFS DERIVED FROM DEXTRAN. U.S. 2,733,236. JAN. 31, 1956.

(914) ------. [ASSIGNEE B]. WOOD STAIN CONTAINING DEXTRAN DYE. U.S. 2,762,679. SEPT. 11, 1956.

(915) ------. [ASSIGNEE B]. CORRUGATED PAPER PRODUCTS UTILIZING DEXTRAN-FORMALDEHYDE REACTION PRODUCTS. U.S. 2,806,787. SEPT. 17, 1957.

(916) ------. [ASSIGNEE B]. METHOD OF MAKING CORRUGATED PAPER PRODUCTS UTILIZING A DEXTRAN-FORMALDEHYDE REACTION PRODUCT. CANADA 579,634. JULY 14, 1959.

OTHER PATENTS: 351 762

H. Miscellaneous

Metallic salts, plastics, resins, and rubber.

(917) ARENDT, J. H., J. P. SACHETTO, AND J. P. CARRIERE. [GALLAHER LIMITED]. SYNTHETIC SMOKING MATERIAL. U.S. 3,720,660. MARCH 13, 1973.

(918) BULLOFF, J. J. [ASSIGNEE B]. PRODUCTION OF CHROMIC ACETYLACETONATE. U.S. 2,823,217. FEB. 11, 1958.

(919) CENTRAL PHARMACAL CO. STABLE DEXTRAN SUBSTITUTION PRODUCTS. FRANCE 1,413,856. OCT. 15, 1965.*

(920) CHEMICALS INC. IRON-DEXTRAN COMPLEXES. BRITAIN 1,019,513. FEB. 9, 1966.

(921) CLARKSON, A. H. [ASSIGNEE B]. HIGHER FATTY ACID ESTERS OF DEXTRAN. BRITAIN 885,516. DEC. 28, 1961.

(922) COMMONWEALTH ENGINEERING CO. OF OHIO. ANTICORROSIVE COMPOSITION. BELGIUM 547,848. AUG. 31, 1956.

(923) FLORAMO, N. A. [CHEMICALS INC.]. CUPRIC HYDROGENATED DEXTRAN AND METHOD FOR PREPARING THE SAME. U.S. 3,197,458. JULY 27, 1965.

(924) GABERT, A., AND B. VOIGT. MACROMOLECULAR CHELATE-FORMING COMPOUNDS. EAST GERMANY 44,124. DEC. 23, 1965. (CHEM. ABSTR. 1966. 64:19901C.)

(925) HILER, M. J. [ASSIGNEE B]. RUSTPROOFING COMPOSITIONS. U.S. 2,756,156. JULY 24, 1956.

(926) ------. [ASSIGNEE B]. CORROSION INHIBITING COMPOSITIONS CONTAINING HYDROCARBON OIL AND A DEXTRAN ESTER OF A SATURATED FATTY ACID. CANADA 557,273. MAY 13, 1958.

(927) LINN, C. B. [UNIVERSAL OIL PRODUCTS CO.]. CONDENSATION OF AROMATIC CARBOXYLIC ACIDS WITH CARBOHYDRATES AND RELATED MATERIALS. U.S. 2,926,174. FEB. 23, 1960.

(928) ------. [UNIVERSAL OIL PRODUCTS CO.]. CONDENSATION OF NITROAROMATIC COMPOUNDS WITH CARBOHYDRATES AND RELATED MATERIALS. U.S. 2,926,175. FEB. 23, 1960.

(929) ------. [UNIVERSAL OIL PRODUCTS CO.]. CONDENSATION OF AROMATIC SULFONIC ACIDS WITH CARBOHYDRATES AND RELATED MATERIALS. U.S. 2,926,176. FEB. 23, 1960.

(930) ------. [UNIVERSAL OIL PRODUCTS CO.]. CONDENSATION OF AMINOAROMATIC COMPOUNDS WITH CARBOHYDRATES AND RELATED MATERIALS. U.S. 2,926,177. FEB. 23, 1960.

(931) ------. [UNIVERSAL OIL PRODUCTS CO.]. CONDENSATION OF HALOAROMATIC COMPOUNDS WITH CARBOHYDRATES AND RELATED MATERIALS. U.S. 2,926,178. FEB. 23, 1960.

(932) ------. [UNIVERSAL OIL PRODUCTS CO.]. CONDENSATION OF AROMATIC ALDEHYDES WITH CARBOHYDRATES AND RELATED MATERIALS. U.S 2,926,179. FEB. 23, 1960.

(933) ------. [UNIVERSAL OIL PRODUCTS CO.]. CONDENSATION OF AROMATIC KETONES WITH CARBOHYDRATES AND RELATED MATERIALS. U.S. 2,926,180. FEB. 23, 1960.

(934) NOVAK, L. J. [ASSIGNEE B]. PLASTIC MATERIALS COMPRISING DEXTRAN AND METHOD OF PREPARATION. U.S. 2,823,188. FEB. 11, 1958.

(935) ------. [ASSIGNEE B]. RESINS COMPRISING POLYESTERS MODIFIED BY DEXTRAN AND A MONOETHYLENICALLY UNSATURATED MONOMER. U.S. 2,885,373. MAY 5, 1959.

(936) ------. [ASSIGNEE B]. REACTION PRODUCT OF DEXTRAN-MODIFIED POLYESTER WITH ORGANIC DIISOCYANATE AND METHOD OF PRODUCING SAME. U.S. 2,933,463. APRIL 19, 1960.

(937) ------. [ASSIGNEE B]. METHOD OF PREPARING PIGMENTED-DEXTRAN MODIFIED POLYESTERS. U.S. 2,954,351. SEPT. 27, 1960.

(938) ------. [ASSIGNEE B]. RESINS COMPRISING POLYESTERS MODIFIED BY DEXTRAN AND A MONOETHYLENICALLY UNSATURATED MONOMER. BRITAIN 852,308. OCT. 26, 1960.

(939) ------. [ASSIGNEE B]. RESINOUS COMPOSITION PREPARED BY REACTING A DEXTRAN MODIFIED POLYESTER WITH NAPHTHALENE DIISOCYANATE AND METHOD OF MAKING SAME. U.S. 2,993,015. JULY 18, 1961.

(940) ------ AND J. T. TYREE. HIGHER FATTY ACID ESTERS. OF DEXTRAN. U.S. 2,954,372. SEPT. 27, 1960.

(941) ------ AND E. P. WENZELBERGER. [MIDLAND CHEMICAL CORP.]. LATEX CONTAINING CARBOXYMETHYL DEXTRAN. U.S. 2,856,372. OCT. 14, 1958.

(942) POTTER, W. W. [CENTRAL PHARMACAL CO.]. ALKALINE EARTH METAL SUBSTITUTION PRODUCTS OF DEXTRAN. BRITAIN 944,186. DEC. 11, 1963.

(943) TOULMIN, H. A., JR. [ASSIGNEE B]. DEXTRAN COATING COMPOSITION. U.S. 2,734,828. FEB. 14, 1956.

(944) ------. [ASSIGNEE B]. COATING COMPOSITION CONTAINING BENZYL ETHER OF A DEXTRAN AND AN ESTER OF A DEXTRAN. CANADA 557,272. MAY 13, 1958.

(945) ----. [ASSIGNEE B]. POLYETHYLENE ADHERENT TO METAL SURFACE AND METHOD OF MAKING SAME WITH DEXTRAN. U.S. 2,910,384. OCT. 27, 1959.

(946) WEAVER, M. O., AND C. R. RUSSELL. [ASSIGNEE A]. CARBOHYDRATE ALIPHATIC AND CYCLIC ACETALS. U.S. 3,294,781. DEC. 27, 1966.

(947) WENZELBERGER, E. P. [ASSIGNEE B]. REACTION PRODUCTS OF DEXTRAN-MODIFIED POLYESTERS WITH UREA-FORMALDEHYDE ALCOHOL CONDENSATES. U.S. 2,809,176. OCT. 8, 1957.

(948) ------. [ASSIGNEE B]. DEXTRAN AND DRYING OIL FATTY ACIDS-MODIFIED POLYESTERS AND METHOD OF PRODUCING THE POLYESTERS. U.S. 2,818,396. DEC. 31, 1957.

(949) ------. [ASSIGNEE B]. BLEND OF DEXTRAN-MODIFIED POLYESTER RESINS WITH METALLO-ORGANO COMPLEXES. U.S. 2,843,553. JULY 15, 1958.

(950) ------. [ASSIGNEE B]. MOLDING COMPOSITIONS COMPRISING DEXTRAN OR DERIVATIVE AND METHOD OF MOLDING. CANADA 605,566. SEPT. 20, 1960.

(951) ------. [ASSIGNEE B]. REACTION PRODUCTS OF DEXTRAN-MODIFIED POLYESTERS WITH UREA-FORMALDEHYDE ALCOHOL CONDENSATES AND METHOD OF PRODUCING. BRITAIN 850,534. OCT. 5, 1960.

(952) WIMMER, E. L. [AMERICAN SUGAR REFINING CO.]. WATER-INSOLUBLE COMPLEX OF QUATERNARY AMMONIUM SALT, A HEAVY METAL OXIDE, AND AN ORGANIC COLLOID AND METHOD OF PREPARING SAME. U.S. 2,853,414. SEPT. 23, 1958.

Index of Patentees

ABE, J. 62 63
ABE, M. 608
ADAMS, E. C., JR. 711 712
AKERSTROM, S. H. J. 477 478
AKTIEBOLAGET ASTRA 531
AKTIEBOLAGET LEO 455
AKTIEBOLAGET PHARMACIA 101 102 103 104 149 150 151 152 153 154 155 156 157 158 159 260 261 262 456 507 763 764 765 766 767 768
AKTIESELSKABET ROSCO 532 533
ALBERT, R. E. 371
ALLEN, A. W. 337
ALSOP, R. M. 160 161 534 535 536 537 538 539
AMERICAN SUGAR REFINING CO. 1
ANTONINI, E. 485 486
AOYAMA, T. 704
ARAI, M. 82
ARAKAWA, S. 457
ARENDT, J. H. 917
ARIMA, K. 64 65
ARIMOTO, Y. 458
ASTRA APOTEKARNES AKTIEBOLAGET 540
ATTEBERY, J. M. 412
AUGUSTAT, S. 669
AXEN, R. E. A. V. 459

BABA, H. 140
BABA, K. 122
BACKMAN, S. V. 713
BAILEY, L. H. 300
BAKAN, J. A. 372 373
BALL, P. W. 301 326 327 328 329 330 331
BANDEL, D. 396 800 801
BARKER, S. A. 123 125
BARNES, W. A. 632
BARNETT, J. O. 730
BAUER, K. 208 505 506
BAUMGARTEN, W. 508
BEHLKE, J. 491
BEHRENS, U. 2 3 4 5 6 7 38 39 40 162 163 164 165 166 167 168 349 541 542 624 625 626 633 722 723 769 770 771 824 885
BEHRINGWERKE AKT.-GES. 509 510 511
BELLAMY, W. D. 169 170
BENDA, A. 8
BENGER LABORATORIES, LTD. 543
BENNETT, W. R. 388

BEPPU, T. 64 65
BERGER, C. 544 825 826 827
BERGKVIST, R. 512
BERSIN, T. 589 590 591 592 593 594 595 596
BERSUDER, J. E. 822 823
BIKALES, N. M. 828
BISHOP, A. E. 724 804 810 811 886 887
BLACK, A. S. 731 732
BLOCK, P. L. 124
BOHN, R. T. 409
BOLTON, W. M. 338
BONSE, D. 77
BORCHERT, P. J. 789 790 791
BOWEN, W. H. 125
BRANDON, F. B. 460
BREMNER, I. 534 535 536 537 538 539
BRICKER, H. M. 93
BRIDGEFORD, D. J. 888
BRISTOL-MYERS CO. 513
BROWN, G. R. 634
BROWN, R. G. 66 67 68
BRUECKNER, D. 211
BUCHANAN, R. A. 912
BUCKO, M. 8
BUETTNER, G. 7
BULLOFF, J. J. 812 840 841 842 918
BURTSEVA, N. N. 86

CARLSON, L. J. 374
CARLSON, V. W. 70 105 106
CARLSON, W. W. 69 70 95 96 97 98 105 107 120 121 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865
CARLSSON, S. A. I. 775 776
CARRIERE, J. P. 917
CASALS, J. B. 553
CENTRAL PHARMACAL CO. 670 671 919
CHAIET, L. 71 72
CHARLES E. FROSST & CO. 263 264 265 266 267
CHAUFFARD, F. 432
CHEMICALS INC. 545 546 547 548 920
CHERKESOVA, G. V. 89 90
CHIBATA, I. 461
CHRISTENSEN, H. M. 171 549 550
CHUGAI SEIYAKU K.K. 635 636 637
CIBA SOCIETA ANONYME 462 463
CLARKSON, A. H. 829 921
COHEN, A. B. 339 340
COLE, R. B. 508
COLGATE-PALMOLIVE CO. 126 127 725
COLONIAL SUGAR REFINING CO., LTD. 803

COMMERCIAL SOLVENTS CORP. 172 173 174 175 176
COMMONWEALTH ENGINEERING CO. OF OHIO 9 73 74 108 109 110 177 268 291 350 375 410 551 552 638 726 727 805 889 922
CORMAN, J. 111 411
CRESCENZI, G. S. 75
CURTIS, J. H. 792 793 794
CWIKLA, M. V. 346
CYPERT, J. D. 302

DALTER, R. S. 178
DANIELS, E. G. 514
DASEK, J. 8
DAUL, G. C. 351
DAVIS, R. S. 76
DE BELDER, A. N. 672 673 674
DE HAAN, H. J. 336
DE MUSQUIZ REUMERT, J. 553
DE VRIES, J. W. 515
DENISTON, G. L. 352 353 376 377 378 379 890 891 892 893 894 895 896
DEUTSCHE AKADEMIE DER WISSCHENSCHAFTEN ZU BERLIN 354
DEXTRAN LIMITED 179 180 181 182 183 184 185 186 187
DIAMANTSTEIN, T. 639
DIENST, C. S. 412
DIMARCO, G. 760
DODD, C. G. 303
DOERFEL, K. 722 728
DOUSSET, M. 432
DOW CHEMICAL CO. 10 304
DRAKE, T. F. 351
DRECHSLER, M. 188
DRESS, W. 305 308 312 313
DRUMMOND, F. E. 355
DUBEY, R. S. 219
DUKE, M. W. 351
DUMBAULD, G. K. 306
DUNNING, H. N. 795

E.I. DU PONT DE NEMOURS & CO. 341
EAST ANGLIA CHEMICAL CO., LTD. 11 12 189 190 191 192 193 194 413
EIBL, J. 719
ELDON, K. E. H. 715
ELLINGBOE, J. 786 787 788
ELLIS, G. P. 675
EMBRING, P. G. 713
EMEIS, C. C. 77
EPPSTEIN, S. H. 516
ERDEI, J. 78
ERNBACH, E. S. 459
ERNST, B. 714

FARRAR, G. E., JR. 730
FEDORONKO, M. 554
FEINSTONE, W. H. 731 732
FLODIN, P. G. M. 269 517 609 610 772 773 774 775 776 777 778 781
FLORAMO, N. A. 555 556 557 558 559 560 561 562 923
"FO-WE" FORSCHUNGS-UND VERWERTUNGS-ANSTALT IN VADUZ 676
FOGG, D. B. 873
FOOTE, E. H., JR. 897
FORD, M. D. 195 611
FORLOT, P. 83
FOWLER, F. 612 614 615 677
FRANKS, N. E. 465 898
FREUDENBERG, R. 723
FRITSCH, W. 466
FUJII, S. 716
FUJII, T. 733
FUJIMOTO, M. 678
FUJISHIMA, T. 563
FUJITA, J. 570
FUJITA, Y. 752
FUKUSHIMA, M. 736

GABERT, A. 3 4 5 6 7 167 168 349 541 542 624 625 626 633 723 728 729 769 770 771 779 796 824 885 924
GAERTNER, V. R. 830
GALLO, A. 627 628 629
GAMBLES, N. E. 880
GARNETT, J. L. 757
GARRETT, A. G. 342
GAVAERT PHOTO-PRODUCTEN N.V 874
GAVER, K. M. 806 807 808
GELOTTE, E. B. 780
GENERAL ELECTRIC CO. 196
GERO, I. 565
GHIMPU, P. 586
GHISELLI, E. 75
GIBBONS, R. A. 613
GILKISON, J. S. 41
GINGER, L. G. 467 468
GINNETTE, L. F. 420 421
GLASZIOU, K. T. 79
GOCHO, S. 62 63
GOLBERG, L. 612 614 615
GOVERNORS OF THE UNIVERSITY OF TORONTO 518
GRABERT, A. 493
GRANATEK, A. P. 679 680
GRANATEK, E. S. 679 680
GRANATH, K. A. 269

GRIMES, J. H. 301 305 307 308 309 310 311 312 313 314 315 325 326 327 328 329 330 331

GROENWALL, A. J. T. 112 197 198 199 200 201 202 203 204 640

GROVES, J. J. 616 617

GUDE, M. 205

GUGGENHEIM, B. 80

GYLLING-PEDERSEN, O. 553

HAEDE, W. 466

HAITSMA, C. T. 712

HALPERN, A. 681

HANAI, H. 693 703 704 705 799

HANUSHEWSKY, M. 469 470

HARCSA, J. 78

HARRIS, S. R. 414

HARTH, H. 128

HARTUNG, G. 875 876 877 878 884

HATTORI, A. 82

HAWORTH, V. C. 194

HAWORTH, W. N. 13

HECKEL, H. C. N. 564 682 683

HEHRE, E. J. 14

HEILEMANN, P. 493

HEIMBURGER, N. 519 526

HEISS, F. 471

HELLMAN, N. N. 14 42 61 209 210

HERB, J. R. 566 567 734

HERESEL, I. 565

HEROLD, M. 641

HERSH, M. I. 730

HEYNE, B. 7 318

HIBI, Y. 99 100

HILER, M. J. 292 293 356 357 358 359 380 381 382 831 925 926

HINK, J. H., JR. 206

HINMAN, J. W. 514

HIROMI, H. 702

HIROSE, T. 119

HJERTEN, V. E. S. 146

HOEGBERG, K. G. 531 578 579

HOFFMAN, C. A. 43

HOFFMANN - LA ROCHE & CO. AKT.-GES. 642

HOFMAN, J. 641

HOGUE, W. S. 361 362 363 365 718

HOKKOKU, S. 761

HOLT, F. W., JR. 404 405 406 407 408

HOMER, H. J. 361 365 366

HONECK, H. 491

HOOVER, M. F. 758 759 760

HOWARD, A. N. 684

HOWE, E. E. 124

HOYT, J. W. 472

HUGHES, M. F. 454
HULTIN, E. 81 270 271 272 273
274

ICHIKAWA, M. 563
IHLO, I. 275
IMORI, M. 733
INABA, Y. 736
INGELMAN, B. G. A. 112 197 198 199 200
201 202 203 204 269
517 640 643 713 773
781
ISBELL, H. S. 473 832
ISENBERG, D. L. 76
ISHIBASHI, K. 82
ISONO, M. 23
IVANOVA, E. A. 685
IVES, D. A. J. 708
IWATA, K. 620 621 622 650 651
652 653 693 799

JACKSON, J. C., JR. 568
JACKSON, R. W. 43
JAMES, A. E. 15 207 644 645 646
JANISZEWSKI, E. 474
JANSSEN, J. D. 336
JASUE, S. 650
JEANES, A. 44 93 809
JEFFERSON, R. T. 682 683
JENNINGS, A. B. 343 344 345
JIRICEK, V. 16
JOHANNSON, H. I. 475
JOHANSSON, C. 269
JOHANSSON, H. L. E. 569 609
JOHANSSON, J. A. O. 609 610 775 776
JOHNSON, F. F. 206
JOHNSON, R. H. 476
JOUSTRA, M. K. 475
JUERGENS, M. 875 876 877 878 884

KAGEDAL, S. L. 477 478
KAMIYA, S. 761
KAO SOAP CO., LTD. 129
KARRIP, A. A. 383
KAS'YANOV, I. S. 883
KASER, W. L. 791
KATOH, S. 692
KATSUHARA, J. 131
KATSUI, G. 570 571
KAUFMAN, W. 208
KAZENKO, A. 44
KEARNEY, J. J. 384
KEEN, J. L. 795

KEMPE, W. 466
KEMPF, A. J. 72
KIGASAWA, K. 647
KIMURA, K. 479
KING, W. J. 130
KITAJIMA, M. 385
KITCHING, J. M. 572
KLAUS, D. 729
KLINGER, G. H. 346
KLIPP, W. 318
KOEPSELL, H. J. 43 44 60 61 209 210
KOKKOKU, H. 652
KOLODKINA, I. I. 685
KOMORI, T. 703 705
KONDO, A. 385
KOOI, E. R. 17 41 45 46 47
KORNACKI, A. 22 587 588
KOSHIMIZU, M. 140
KOTERA, H. 686
KOTERA, K. 88
KRAJEWSKI, R. M. 415
KRESS, B. H. 360
KRUEGER, D. 275
KRUEGER, K. 167 168 211 275
KRUEGER, W. 520
KUS, H. H. 632
KUZUYA, F. 687
KYOWA HAKKO KOGYO CO., LTD. 480

LABORATORIEN HAUSMANN AKT.-GES. 573 574 575
LABORATORIEN HAUSMANN LTD. 576
LACHMANN, A. 416
LACKO, L. 20 21 212 213 688
LAKATA, G. D. 35
LANDSBERGER, A. 481
LANE, E. S. 307 309 311 314
LANGHAMMER, G. 796
LASURE, E. P. 807 808
LE STRANGE, R. J. 342
LEBERZAMMER, E. 879
LEE, E. W. 880
LEE, T. B. 675
LEININGER, R. I. 387
LEMMERLING, J. T. 881
LERNER, J. L. 394
LESINSKI, C. A. 386
LEVI, M. M. I. 276 277 278 279 280 281
LEWIS, S. H. 577 607
LEZIUS, A. 492
LINDBERG, B. J. 672 674
LINDBLOM, G. P. 316
LINDVALL, S. 531 578 579
LINN, C. B. 927 928 929 930 931 932 933
LIPPS, B. J., JR. 18 19

LOCKWOOD, A. R. 11 194 214 215 216 217
LONDON, E. 580 581 582 583 584
LOVER, M. J. 124
LOWE, O. G. 782
LOZINSKI, E. 276 277 278 279 280 281
LUACES, E. L. 899 900 901 902
LUDWIG, G. 796
LUKASZEWSKI, M. 689
LUMMUS, J. L. 317
LUNDGREEN, H. K. 475
LYCKEBY STARKELSEFORADLIN AKTIEBOLAGET 417

MAEDA, K. 717
MAGUIRE, R. 521
MAHONEY, J. C. 418
MALEK, J. 20 21 212 213 688
MALEK, P. 641
MALONE, T. F. 435
MANGENOT, F. 83
MARGARIT TAYA, M. 663
MARGOTTE, E. 218
MARTENSSON, O. 643
MARTIN, T. L. 833
MASAMOTO, Y. 131
MATHER, A. N. 467 468 521
MATSUKI, T. 603
MATSUMOTO, I. 686
MATSUMOTO, S. 233
MATSUMOTO, T. 631
MAVI, S. S. 219
MCKENNA, N. J. 310 315
MCNEELEY, W. H. 782
MCNULTY, D. G. 387
MECH, P. J. 435
MEITO SANGYO K.K. 220 419 585 648 649
MELLIES, R. L. 258
MENCIER, F. 83
MENGEL, K. 639
MERCK AND CO., INC. 84 85 132 133 134
MESSER, G. 520
MESSING, R. A. 522
MICHAEL, S. E. 482
MICHNIEWICZ, J. J. 489 490
MIHAILESCU, G. 586
MILES LABORATORIES INC. 797 798
MILLER, G. R. 130 135 136
MINEHARA, H. 647
MINGER, F. R. 388
MIODUSZEWSKA, M. H. 22 221 587 588 618 619
MIODUSZEWSKI, J. Z. 22 221 587 588 618 619 689 690
MIRZA, J. 791
MISAKI, A. 23

MIWA, T. 660
MIYAJI, H. 691 702
MIYANO, S. 385
MIZUTANI, A. 483 484
MOLODOVA, G. A. 86
MOLTENI, L. 485 486
MONAGHAN, P. H. 306
MORGAN, A. I., JR. 420 421 422
MORI, T. 461
MORII, E. 620 621 622 650 651 652 653 692 693 735 799
MORISHITA, M. 736
MOSIMANN, H. 640
MOTOSATO, Y. 222
MUEHLEMANN, H. R. 80
MUELLER, A. 589 590 591 592 593 594 595 596
MUELLER, P. 318
MUGGLETON, P. W. 487 488
MULLER, F. 694
MULLER, P. 32
MUSSGAY, M. 505 506

NACHTIGAL, J. H. 141
NACK, H. R. 389
NAGAI, H. 717
NAGASAWA, K. 654 655
NAKA, Y. 99 100
NAMEKATA, M. 659
NANTKA-NAMIRSKI, P. 689
NARANG, S. A. 489 490
NARAYAN, K. 219
NATIONAL RESEARCH DEVELOPMENT CORP. 656 657 658
NAWATA, Y. 659
NEELY, W. B. 48 762
NEGREVERGNE, G. 695
NELSON, M. F., JR. 749 750 751
NGUYEN, T. Y. 757
NIITANI, H. 660
NITTA, Y. 659
NOMOTO, M. 227
NORDSTROEM, L. 81 270 271 272 273 274
NOVAK, L. J. 24 25 30 113 114 115 116 195 223 224 225 226 294 295 297 298 299 355 361 362 363 364 365 366 367 368 389 390 391 392 393 423 424 425 426 427 428 429 430 431 544 597 598 599 611 696 697 698 699 700 701 718 737 738 739 740 741 742 743 744

745 746 747 804 810
811 812 813 814 815
816 817 818 819 820
821 825 826 827 834
835 836 837 838 839
840 841 842 843 844
845 903 904 905 906
907 908 909 910 911
934 935 936 937 938
939 940 941
NOVAK, N. R. 711
NOVO TERAPEUTISK LABORATORIUM A/S 523 524
NUMASAWA, T. 620 621 653
NUMAZAWA, C. 622
NUMAZAWA, T. 702 703 704 705
NYSTROM, E. H. 786 787 788

OEPPINGER, H. 26
OHTAKA, Y. 233
OKANIWA, T. 82
OKUYAMA, T. 227 661 662 748
ONISHI, Y. 761
ONO, H. 119
OPPERMANN, A. 26
ORADI, E. 485
ORTLOFF, G. D. 316
OTTE, E. 349 885
OWEN, W. L. 27 300 319 320 783
OWEN, W. L., JR. 27 300
OZAWA, H. 494 785

PAN, S. C. 394
PARCELLS, A. J. 525
PATAT, F. 49
PATTON, J. T. 302 316 321 322 323
PAUTARD, F. G. E. 228 229 230 231 232
234
PEAKE, P. Q. 296
PETROVA, L. I. 86
PICHUZHKINA, E. I. 685
PLATOSHKIN, A. M. 706
POLUSHINA, T. V. 846
POLYA, K. 78
POMMERENING, K. 491
PORATH, J. O. 459 772 777
POTTER, W. W. 942
POVIET PRODUCTEN N. V 117 118
POWERS CHEMCO INC. 347
PULLMAN, J. W. 282

RANDALL, B. V. 317
RAU, K. 128 137
REDO, S. F. 632

REGNIER, F. E. 784
REY, L. R. 432
RHODE, W. 492
RICARD, R. 663
RICKETTS, C. R. 644 645 646 664 665 666 667 668
RINGPFEIL, M. 2 3 4 5 6 39 40 162 163 164 165 166 167 168 349 541 542 624 625 626 633 722 723 769 770 771 824 885
RIST, C. E. 258 259 912
ROCADOR, S. A. 600 601
ROCK, J. D. 757
ROGERS, J. 395
ROGOVIN, S. P. 42
ROSENBERG, S. 396 800 801
ROSKILDE MEDICAL CO. LTD. 283 284 285 286 287 602
ROTH, P. 493
ROZENBERG, G. Y. 846
ROZENSHTRAUKH, L. S. 883
RUDEL, M. 493
RUDISELL, S. R. 324
RUSSELL, C. R. 912 946
RUSSELL, K. L. 749 750 751

SAAR, U. 639
SACHETTO, J. P. 917
SAITO, K. 140
SAITO, S. 647
SAKURAI, K. 661 662 707 748 752
SANKYO CO., LTD. 87
SARGENT, R. N. 28
SATO, S. 233
SATO, T. 494
SAUNDERS, J. F. 495
SCARGILL, D. 325
SCHAPER, R. J. 759 760
SCHEER, K. 128
SCHERER, H. 466
SCHIERBAUM, F. 433
SCHMIDTBERGER, R. 519
SCHOTT, H. 397
SCHULTZE, H. E. 205 526
SCHWARZ, G. 348
SCHWENKE, K. D. 669
SCHWICK, G. 519
SCHWIMMER, S. 422
SCOTT, K. T. B. 301 310 315 325 326 327 328 329 330 331
SEIDE, H. 779
SEIDEL, D. 719
SENATORE, P. J. 434
SENTI, F. R. 14
SHACKLETT, C. D. 339

SHALER, R. G. 332
SHAMOTO, M. 238 651
SHIBUSAWA, K. 457
SHIBUYA, K. 138
SHIMADA, K. 88
SHIMIZU, H. 494 785
SHURTER, R. A. 50
SILAEV, A. B. 89 90
SIMON, B. 669
SINKOVITZ, G. D. 758 759
SIPOS, T. 91
SJOESTROEM, C. G. E. 51 52 53
SJOVALL, J. B. 786 787 788
SLACK, C. R. 79
SLAGER, J. E. 802
SMITH, A. C., JR. 873
SMITH, D. F. 753
SMITH, T. A. 435
SOCIETA FARMACEUTICI ITALIA 630
SODERQVIST, B. G. F. 780
SOUTH AFRICAN INVENTIONS DEVELOPMENT CORP. 496
SPARKS, W. J. 333
SPROSS, A. H. B. 517 720
STACEY, M. 13 228 229 231 232 234
STAHLY, G. L. 29 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865
STANKO, G. L. 288
STAVELY, H. E. 235 236
STEIN, J. 481
STEVENS, J. R. 290
STOJANOW, I. 520
STOUDT, T. H. 139 142 143 144
STOYCOS, G. S. 24 25 30 54 55 113 237
STRINGER, C. S. 411
SUCHY, J. 554
SUEMASU, K. 660
SUGASUMA, N. 122 140
SUGIURA, M. 119
SULLIVAN, E. J. 386
SUMI, Y. 603
SUZUKI, F. 497 498
SUZUKI, M. 563 631
SUZUKI, S. 631
SVENSKA SOCKERFABRIKS AKTIEBOLAGET 56 57 58 59
SVIRIDOV, N. K. 883
SWANSON, R. R. 795
SWIFT, G. 11 214 215 216
SYNOWIEDZKI, Z. 604

TABE, H. 605 606
TAGA, Y. 238 650
TAISHO SEIYAKU K.K. 527

TAKEBE, T. 570
TAKEDA, Y. 497 498
TAKEI, T. 661
TANAKA, Y. 479 662
TAYLOR, A. R. 460
TEE PAK INC. 369
THOMAS, L. M. 807 808
THULIN, K. E. 499
TILBURY, R. H. 147 148
TOEPERT, M. 639
TOMIYAMA, S. 733
TOMIZAWA, S. 692
TOPORSKI, W. 188
TOSA, T. 461
TOSONI, A. L. 708
TOULMIN, H. A., JR. 334 370 398 399 400 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 754 755 866 867 868 869 870 913 914 915 916 943 944 945
TOYO JOZO KK 92
TREBBI, A. 486
TSUCHIYA, H. M. 14 42 60 61 93 111 209 210 411
TUNNAH, G. W. 482
TURNHEIM, F. 728 729
TWIGG, G. D. 580 581 582 583 584
TYREE, J. T. 364 747 843 909 910 911 940

UEDA, S. 458
UEMURA, T. 88
UNGAR, J. 487 488
UNITED KINGDOM ATOMIC ENERGY AUTHORITY 335
UPJOHN CO. 528 529 709

VAN HEININGEN, J. 336
VANECEK, R. 31
VEB FOTOCHEMISCHE WERKE BERLIN 871
VEB SERUM-WERK BERNBURG 240 241 756
VERMEHREN, T. L. M. 500 501 502 623
VICCARO, J. P. 94
VIDRA, J. D. 141
VIEBROCK, F. W. 91
VINOGRADOVA, K. A. 89 90
VOELKER, U. F. 721
VOIGT, B. 924
VOLCHENKO, M. F. 401
VON LILLIENSKIOLD, M. 242 243 244 245 246 247 248 249 250 251 252 253 254 255
VOZNAYA, N. G. 401

WADSWORTH, D. V. 454
WALDIE, W. A. 822 823
WALTON, K. W. W. H. 666 667 668
WAND, H. 796
WARD, W. J. 795
WARNCKE, H. 884
WATANABE, T. 62 63
WATSON, P. R. 259
WEAVER, J. M. 94
WEAVER, M. O. 946
WEILAND, R. 824
WELLCOME FOUNDATION LTD. 503 504
WELZEL, H. 875 876 877 878 884
WENZELBERGER, E. P. 402 403 872 941 947 948 949 950 951
WERTHER, H. 32
WERTHER, H. D. 32
WESTFALL, R. J. 577 607
WHITE, W. F. 530
WHITESIDE-CARLSON, V. 69 95 96 97 98 107 120 121
WIELAND, H. 719
WIEMAN, R. L. 289
WIGGINS, L. F. 123
WILHAM, C. A. 93 809
WILLENBERG, W. 246 247 248 256
WIMMER, E. L. 33 34 35 36 257 952
WITT, E. E. 114 115 116 226 295 297 298 299 404 405 406 407 408 564 710 844 845
WITTMANN, G. 505 506
WOLFF, I. A. 258 259
WOODRUFF, H. B. 139 142 143 144 145

YAMADA, Y. 608
YAMAGUCHI, T. 62 63
YAMAMOTO, M. 479
YAMAMOTO, T. 761
YAMANAKA, S. 37
YAMAZAKI, Y. 138
YOKIO, N. 99 100
YOKOYAMA, M. 64 65
YOSHIDOME, H. 655
YOSHINO, H. 563
YUKAWA, S. 23
YURKEVICH, A. M. 685

ZAFFARONI, P. 75
ZEIF, M. 290
ZHESTKOV, V. A. 846

Index of Assignees

ABBOTT LABORATORIES 288 530
AKTIEBOLAGET ASTRA 578 579
AKTIEBOLAGET PHARMACIA 112 197 198 199 200 201 202 203 204 269 477 478 499 517 609 610 643 672 673 674 684 713 720 772 773 774 775 776 777 778 780 781
AKTIESELSKABET ROSCO 553
ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF VITAMINS 685
ALL-UNION SCIENTIFIC-RESEARCH INSTITUTE OF PROTEIN BIOSYNTHESIS 86 89 90
AMANO PHARMACEUTICAL CO., LTD. 99
AMERICAN CYANAMID CO. 828
AMERICAN HOME PRODUCTS CORP. 730
AMERICAN MACHINE & FOUNDRY CO. 396 800 801
AMERICAN SUGAR REFINING CO. 33 34 35 36 257 416 952
AMERICAN TANSUL CO. 332
ARMOUR PHARMACEUTICAL CO. 577 607
ASPRO-NICHOLAS LTD. 123

BAXTER LABORATORIES, INC. 91 467 468 469 470 521
BECKMAN INSTRUMENTS, INC. 76
BEHRINGWERKE AKT.-GES. 205 519 526
BENGER LABORATORIES LTD. 580 581 582 583 584 612 614 615 675 677
BIOCHEMICAL INDUSTRY CO., LTD. 227
BIOGAL GYOGYSZERGYAR 78
BLENDAX-WERKE R. SCHNEIDER UND CO. 128 137
BOOTS PURE DRUG CO., LTD. 616 617
BRISTOL-MYERS CO. 679 680

CALGON CORP. 758 759 760
CANADIAN PATENTS AND DEVELOPMENT LTD. 490
CENTRAL INSTITUTE OF HEMATOLOGY AND BLOOD TRANSFUSION 706 846
CENTRAL PHARMACAL CO. 564 611 682 683 696 698 699 700 701 942
CHADELOID CORP. 389
CHARLES E. FROSST & CO. 276 277 278 279 280 281
CHAS. PFIZER AND CO., INC. 434
CHEMICAL DEVELOPMENTS CORP. 822 823 862 863 864 865
CHEMICALS INC. 555 556 557 558 559 562

CHINOIN GYOGYSZER ES VEGYESZETI TERMEKEK GYARA RT. 565
CHIYODA CHEMICAL INDUSTRY CO. 37
CHOAY S.A. 83
CHUGAI SEIYAKU K.K. 659
COLGATE-PALMOLIVE CO. 130 135 136 141 749 750 751
COLONIAL SUGAR REFINING CO., LTD. 79 414
COMMERCIAL SOLVENTS CORP. 50 178 235 236 289
COMMONWEALTH ENGINEERING COMPANY OF OHIO [ASSIGNEE B] 24 25 29 30 55 70 96 97 98 106 107 113 114 115 116 120 121 195 223 224 225 226 237 292 293 294 295 296 297 298 299 334 352 353 355 356 357 358 359 361 362 363 364 365 366 367 368 370 377 378 379 380 381 382 390 391 392 393 395 398 399 400 402 403 404 405 406 407 408 423 425 428 431 436 437 438 439 441 443 444 447 448 449 450 451 452 597 598 599 697 710 724 737 738 739 740 741 742 743 744 745 746 747 755 804 810 811 812 813 817 818 819 820 821 825 826 827 829 831 834 835 837 838 839 840 841 842 843 861 866 867 868 869 870 886 887 890 891 892 893 894 895 896 897 903 904 905 906 907 908 909 910 911 913 914 915 916 918 925 926 934 935 936 937 938 939 943 944 945 947 948 949 950 951
COMMONWEALTH ENGINEERING CORP. 850 851 852 853 854 855 856 857 858 859 860
CORN PRODUCTS REFINING CO. 17 41 45 46 47
CORNELL RESEARCH FOUNDATION, INC. 632
COURTAULDS, LTD. 351
CROOKES LABORATORIES LTD. 482 572
CROWN ZELLERBACH CORP. 374
CUTTER LABORATORIES 206 282

DAI-NIPPON DRUG MANUFACTURING CO. 686
DAIICHI, SEIYAKU CO., LTD. 716

DEUTSCHE AKADEMIE DER WISSENSCHAFTEN ZU BERLIN 4
DEXTRAN LTD. 15 207 216 217 228 229 230 231 232 234
DIAMOND ALKALI CO. 387
DOW CHEMICAL CO. 48 386 388 415 762

E.I. DU PONT DE NEMOURS & CO. 339 340 342 343 344 345 371 397 879
EAST ANGLIA CHEMICAL CO., LTD. 214
EASTMAN KODAK CO. 873
EISAI CO., LTD. 570 571
EMERY CARLTON SWANSON 412
ESSO PRODUCTION RESEARCH CO. 18 19
ETHICON INC. 522

FA. B. BRAUN 218
FARBENFABRIKEN BAYER AKT.-GES. 208 505 506
FARBWERKE HOECHST AKT.-GES. 26 49 466
FERMENTATION RESEARCH INSTITUTE INC. 608
FISONS PHARMACEUTICALS LTD. 160 161 534 535 536 537 538 539
FUJI PHOTO FILM CO., LTD. 385
FUJIMOTO PHARMACEUTICAL CO., LTD. 678

GAF CORP. 346
GALLAHER LIMITED 917
GAVAERT PHOTO-PRODUCTEN N.V. 881
GENERAL ELECTRIC CO. 169 170
GENERAL MILLS INC. 795
GLAXO LABORATORIES LTD. 487 488
GOVERNORS OF THE UNIVERSITY OF TORONTO AND ASTRA PHARMACEUTICAL PRODUCTS INC. 708
GRELAN PHARMACEUTICAL CO., LTD. 647

HAUSMANN LABORATORIES LTD. 590 591

ILFORD LTD. 880
IMMUNO A.-G. FUER CHEMISCH-MEDIZINISCHE PRODUKTE 719
INSTYTUT FARMACEUTYCZNY 221 690
INSTYTUT PRESEMYSLU FARMACEUTYCZNEGO 22
INSTYTUT WETERYNARII ZAKLAD TECHNOLOGII I KONTROLI LEKOW WETERYNARYJNYCH 604

J. T. BAKER CHEMICAL CO. 290
JERSEY PRODUCTION RESEARCH CO. 302 306 316 321 322 323 333
JOHN U. BARR 319
JUERGENS, RALF AND JUERGENS, UWE 884

KARME FINE CHEMICAL CO., LTD. 761
KEEVER STARCH CO. 807 808
KELCO CO. 782
KIROVOGRAD INSTITUTE OF AGRICULTURAL EQUIPMENT ENGINEERING 401
KNOLL AKT.-GES.-CHEMISCHE FABRIKEN 694
KOJIN LTD. 64 65
KOWA CO., LTD. 631 660 717
KUTNOWSKIE ZAKLADY FARMACEUTYCZNE "POLFA" 587 588 618 619 689
KYOWA FERMENTATION INDUSTRY CO., LTD. 479

LABORATORIEN HAUSMANN AKT.-GES. 589 593 594 595 596
LION DENTIFRICE CO., LTD. 122
LION FAT AND OIL CO., LTD. 138 140

MALLINCKRODT CHEMICAL WORKS 634
MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSHAFTEN E.V. 492
MEITO KOGYO CO., LTD. 650
MEITO SANGRAN CO., LTD. 702
MEITO SANGYO CO., LTD. 483 484 497 498 620 621 622 653 687 691 693 703 704 705
MEITO SANGYO K.K. 238 651 652 692 735
MERCK AND CO., INC. 71 72 124 139 142 143 144 145 508
MIDLAND CHEMICAL CORP. 424 426 427 429 430 440 442 445 453 718 814 815 816 836 844 845 872
MILES LABORATORIES INC. 711 712 789 790 791 792 793 794 802
MITSUBISHI CHEMICAL INDUSTRIES CO., LTD. 233
MONSANTO CHEMICAL CO. 435 830
MONTAGNE VON LILLIENSKIOLD 247 256
MOSCOW SCIENTIFIC-RESEARCH ROENTGEN-RADIOLOGICAL INST. 883

N. V. DE BATAAFSCHE PETROLEUM MAATSCHAPPIJ 336
NATIONAL CASH REGISTER CO. 372 373

NATIONAL RESEARCH COUNCIL, CANADA 489
NATIONAL RESEARCH DEVELOPMENT CORP. 613 644 645 646 664 665 666 667 668
NESTLE'S PRODUCTS LTD. 432
NEW WRINKLE INC. 899 900 901 902
NORDISK INSULIN-LABORATORIUM 715

OHIO STATE UNIVERSITY RESEARCH FOUNDATION 806
OLIN MATHIESON CHEMICAL CORP. 394
ONO PHARMACEUTICAL CO., LTD. 119
ORGANON, INC. 515

PAN AMERICAN PETROLEUM CORP. 317
PARKE, DAVIS & CO. 460
PHARMACHEM CORP. 734
PHARMACIA FINE CHEMICALS AB 146 475
PHILLIPS PETROLEUM CO. 324
PIERREL S.P.A. 75
PLOUGH, INC. 731 732
POWERS CHEMCO INC. 348
PROCTER AND GAMBLE CO. 465 898
PURDUE FREDERICK CO. 695
PURE OIL CO. 303

QUAKER CHEMICAL PRODUCTS CORP. 360

R. K. LAROS CO. 409 566 567
REFINED SYRUPS AND SUGARS INC. 454
ROCADOR SOCIEDAD ANON. 663
ROMANIA MEDICINE PLANT "BIOFARM" 586
ROSKILDE MEDICAL CO., LTD. 549 550
ROYAL COLLEGE OF SURGEONS OF ENGLAND; MEDICAL RESEARCH COUNCIL 125

SANKYO CO., LTD. 82 458
SCHERING A.-G. 639
SCHERING CORP. 337
SCHIEFFELIN & CO. 681
SCHWEIZERISCHE FERMENT A.-G. 80
SEIKAGAKU KOGYO CO., LTD. 661 662 707 748 752
SOCIEDAD QUIMICO FARMACEUTICA DE LOS ESTABLECIMIENTOS ROCAFORT DORIA, SOCIEDAD ANON. 600
SOCIETA FARMACEUTICI ITALIA 627 628 629
SUNSTAR DENTRIFRICE CO., LTD. 131
SVENSKA SOCKERFABRIKS AKTIEBOLAGET 51 52

TAKEDA CHEMICAL INDUSTRIES, LTD. 23 605
TAKEDA PHARMACEUTICAL INDUSTRIES, LTD. 606
TANABE SEIYAKU CO., LTD. 461
TATE AND LYLE LTD. 147 148
TEE-PAK INC. 888
TELL AND USHER LTD. 215
TORAY INDUSTRIES, INC. 494 785
TOYO JOZO CO., LTD. 736
TOYO JOZO KABUSHIKI 63

UNION CARBIDE CORP. 338 446
UNISEARCH LTD. 757
UNITED KINGDOM ATOMIC ENERGY AUTHORITY 301 307 308 309 310 311 312 313 315 325 326 327 328 329 330 331
UNITED STATES DEPT. OF THE NAVY 472
UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF AGRICULTURE [ASSIGNEE A] 14 42 43 44 60 61 93 111 209 210 258 259 411 420 421 422 809 912 946
UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF COMMERCE 473 832
UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF THE NAVY 495
UNIVERSAL OIL PRODUCTS CO. 927 928 929 930 931 932 933
UPJOHN CO. 476 514 516 525

VEB FOTOCHEMISCHE WERKE, BERLIN 875 877 878
VEB SERUM-WERK BERNBURG 2 40 163 165 166 168 624 626 633 771 779
VERSUCHS- UND LEHRANSTALT FUER SPIRITUSFABRIKATION 161 VERSUCHS- UND LEHRENSTALLT FUER BRAUEREI IN BERLIN 77

WAKAMOTO PHARMACEUTICAL CO., LTD. 603
WAKUNAGA PHARMACEUTICAL CO., LTD. 457

YAMASA SHOYU CO., LTD. 563

ZAMBELETTI, DR. L., S.P.A. 485 486

ACKNOWLEDGMENTS

Several individuals and organizations have made valuable contributions to this project. Ted Lefco, former NRRC patent adviser, provided a record for several years of the dextran patents granted in the United States from his regular searching of the Official Gazette of the U.S. Patent Office. The Patent Department, Corn Products Company, Argo, Ill., made available from its private files the references and abstracts of about 250 of the foreign patents included.

Aktiebolaget Pharmacia, Uppsala, Sweden, expedited completion of "Dextran Bibliography Part A" by sponsorship under a memorandum of understanding, which made it possible for Bengt Norrman, chemist, Research Division, AB Pharmacia, Uppsala, Sweden, to assist with compilation of Part A as a special appointee to NRRC.

Judith A. Hoskins provided technical assistance in applying computer and other facilities to preparation of the manuscript, and Royden O. Butterfield, head, Computer Applications, designed the computer programs for listing and numbering references and preparing indices.

U. S. GOVERNMENT PRINTING OFFICE : 1978 O - 263-709

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
HYATTSVILLE, MARYLAND 20782

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR 101

U.S.MAIL